ATGAAATTTA GTAAAAAATA TATAGCAGCT GGATCAGCTG TTATCGTATC CTTGAGTCTA 60
TGTGCCTATG CACTAAACCA GCATCGTTCG CAGGAAAATA AGGACAATAA TCGTGTCTCT 120
TATGTGGATG GCAGCCAGTC AAGTCAGAAA AGTGAAAACT TGACACCAGA CCAGGTTAGC 180
CAGAAAGAAG GAATTCAGGC TGAGCAAATT GTAATCAAAA TTACAGATCA GGGCTATGTA 240
ACGTCACACG GTGACCACTA TCATTACTAT AATGGGAAAG TTCCTTATGA TGCCCTCTTT 300
AGTGAAGAAC TCTTGATGAA GGATCCAAAC TATCAACTTA AAGACGCTGA TATTGTCAAT 360
GAAGTCAAGG GTGGTTATAT CATCAAGGTC GATGGAAAAT ATTATGTCTA CCTGAAAGAT 420
GCAGCTCATG CTGATAATGT TCGAACTAAA GATGAAATCA ATCGTCAAAA ACAAGAACAT 480
GTCAAAGATA ATGAGAAGGT TAACTCTAAT GTTGCTGTAG CAAGGTCTCA GGGACGATAT 540
ACGACAAATG ATGGTTATGT CTTTAATCCA GCTGATATTA TCGAAGATAC GGGTAATGCT 600
TATATCGTTC CTCATGGAGG TCACTATCAC TACATTCCCA AAAGCGATTT ATCTGCTAGT 660
GAATTAGCAG CAGCTAAAGC ACATCTGGCT GGAAAAAATA TGCAACCGAG TCAGTTAAGC 720
TATTCTTCAA CAGCTAGTGA CAATAACACG CAATCTGTAG CAAAAGGATC AACTAGCAAG 780
CCAGCAAATA AATCTGAAAA TCTCCAGAGT CTTTTGAAGG AACTCTATGA TTCACCTAGC 840
GCCCAACGTT ACAGTGAATC AGATGGCCTG GTCTTTGACC CTGCTAAGAT TATCAGTCGT 900
ACACCAAATG GAGTTGCGAT TCCGCATGGC GACCATTACC ACTTTATTCC TTACAGCAAG 960
CTTTCTGCTT TAGAAGAAAA GATTGCCAGA ATGGTGCCTA TCAGTGGAAC TGGTTCTACA 1020
GTTTCTACAA ATGCAAAACC TAATGAAGTA GTGTCTAGTC TAGGCAGTCT TTCAAGCAAT 1080
CCTTCTTCTT TAACGACAAG TAAGGAGCTC TCTTCAGCAT CTGATGGTTA TATTTTTAAT 1140
CCAAAAGATA TCGTTGAAGA AACGGCTACA GCTTATATTG TAAGACATGG TGATCATTTC 1200
CATTACATTC CAAAATCAAA TCAAATTGGG CAACCGACTC TTCCAAACAA TAGTCTAGCA 1260
ACACCTTCTC CATCTCTTCC AATCAATCCA GGAACTTCAC ATGAGAAACA TGAAGAAGAT 1320
GGATACGGAT TTGATGCTAA TCGTATTATC GCTGAAGATG AATCAGGTTT TGTCATGAGT 1380
CACGGAGACC ACAATCATTA TTTCTTCAAG AAGGACTTGA CAGAAGAGCA AATTAAGGCT 1440
GCGCAAAAAC ATTTAGAGGA AGTTAAAACT AGTCATAATG GATTAGATTC TTTGTCATCT 1500
CATGAACAGG ATTATCCAGG TAATGCCAAA GAAATGAAAG ATTTAGATAA AAAAATCGAA 1560
GAAAAAATTG CTGGCATTAT GAAACAATAT GGTGTCAAAC GTGAAAGTAT TGTCGTGAAT 1620
AAAGAAAAAA ATGCGATTAT TTATCCGCAT GGAGATCACC ATCATGCAGA TCCGATTGAT 1680
GAACATAAAC CGGTTGGAAT TGGTCATTCT CACAGTAACT ATGAACTGTT TAAACCCGAA 1740
GAAGGAGTTG CTAAAAAAGA AGGGAATAAA GTTTATACTG GAGAAGAATT AACGAATGTT 1800
GTTAATTTGT TAAAAAATAG TACGTTTAAT AATCAAAACT TTACTCTAGC CAATGGTCAA 1860
AAACGCGTTT CTTTTAGTTT TCCGCCTGAA TTGGAGAAAA AATTAGGTAT CAATATGCTA 1920
GTAAAATTAA TAACACCAGA TGGAAAAGTA TTGGAGAAAG TATCTGGTAA AGTATTTGGA 1980
GAAGGAGTAG GGAATATTGC AAACTTTGAA TTAGATCAAC CTTATTTACC AGGACAAACA 2040
TTTAAGTATA CTATCGCTTC AAAAGATTAT CCAGAAGTAA GTTATGATGG TACATTTACA 2100
GTTCCAACCT CTTTAGCTTA CAAAATGGCC AGTCAAACGA TTTTCTATCC TTTCCATGCA 2160
GGGGATACTT ATTTAAGAGT GAACCCTCAA TTTGCAGTGC CTAAAGGAAC TGATGCTTTA 2220
GTCAGAGTGT TTGATGAATT TCATGGAAAT GCTTATTTAG AAAATAACTA TAAAGTTGGT 2280
GAAATCAAAT TACCGATTCC GAAATTAAAC CAAGGAACAA CCAGAACGGC CGGAAATAAA 2340
ATTCCTGTAA CCTTCATGGC AAATGCTTAT TTGGACAATC AATCGACTTA TATTGTGGAA 2400
GTACCTATCT TGGAAAAAGA AAATCAAACT GATAAACCAA GTATTCTACC ACAATTTAAA 2460
AGGAATAAAG CACAAGAAAA CTCAAAACTT GATGAAAAGG TAGAAGAACC AAAGACTAGT 2520
GAGAAGGTAG AAAAAGAAAA ACTTTCTGAA ACTGGGAATA GTACTAGTAA TTCAACGTTA 2580
GAAGAAGTTC CTACAGTGGA TCCTGTACAA GAAAAAGTAG CAAAATTTGC TGAAAGTTAT 2640
GGGATGAAGC TAGAAAATGT CTTGTTTAAT ATGGACGGAA CAATTGAATT ATATTTACCA 2700
TCAGGAGAAG TCATTAAAAA GAATATGGCA GATTTTACAG GAGAAGCACC TCAAGGAAAT 2760
GGTGAAAATA AACCATCTGA AAATGGAAAA GTATCTACTG GAACAGTTGA GAACCAACCA 2820
ACAGAAAATA AACCAGCAGA TTCTTTACCA GAGGCACCAA ACGAAAAACC TGTAAAACCA 2880
GAAAACTCAA CGGATAATGG AATGTTGAAT CCAGAAGGGA ATGTGGGGAG TGACCCTATG 2940
TTAGATCCAG CATTAGAGGA AGCTCCAGCA GTAGATCCTG TACAAGAAAA ATTAGAAAAA 3000
TTTACAGCTA GTTACGGATT AGGCTTAGAT AGTGTTATAT TCAATATGGA TGGAACGATT 3060
GAATTAAGAT TGCCAAGTGG AGAAGTGATA AAAAAGAATT TATCTGATTT CATAGCGTAA 3120

(SEQ ID NO: 1) FIGURE 1

MKFSKKYIAA GSAVIVSLSL CAYALNQHRS QENKDNNRVS YVDGSQSSQK 50
SENLTPDQVS QKEGIQAEQI VIKITDQGYV TSHGDHYHYY NGKVPYDALF 100
SEELLMKDPN YQLKDADIVN EVKGGYIIKV DGKYYVYLKD AAHADNVRTK 150
DEINRQKQEH VKDNEKVNSN VAVARSQGRY TTNDGYVFNP ADIIEDTGNA 200
YIVPHGGHYH YIPKSDLSAS ELAAAKAHLA GKNMQPSQLS YSSTASDNNT 250
QSVAKGSTSK PANKSENLQS LLKELYDSPS AQRYSESDGL VFDPAKIISR 300
TPNGVAIPHG DHYHFIPYSK LSALEEKIAR MVPISGTGST VSTNAKPNEV 350
VSSLGSLSSN PSSLTTSKEL SSASDGYIFN PKDIVEETAT AYIVRHGDHF 400
HYIPKSNQIG QPTLPNNSLA TPSPSLPINP GTSHEKHEED GYGFDANRII 450
AEDESGFVMS HGDHNHYFFK KDLTEEQIKA AQKHLEEVKT SHNGLDSLSS 500
HEQDYPGNAK EMKDLDKKIE EKIAGIMKQY GVKRESIVVN KEKNAIIYPH 550
GDHHHADPID EHKPVGIGHS HSNYELFKPE EGVAKKEGNK VYTGEELTNV 600
VNLLKNSTFN NQNFTLANGQ KRVSFSFPPE LEKKLGINML VKLITPDGKV 650
LEKVSGKVFG EGVGNIANFE LDQPYLPGQT FKYTIASKDY PEVSYDGTFT 700
VPTSLAYKMA SQTIFYPFHA GDTYLRVNPQ FAVPKGTDAL VRVFDEFHGN 750
AYLENNYKVG EIKLPIPKLN QGTTRTAGNK IPVTFMANAY LDNQSTYIVE 800
VPILEKENQT DKPSILPQFK RNKAQENSKL DEKVEEPKTS EKVEKEKLSE 850
TGNSTSNSTL EEVPTVDPVQ EKVAKFAESY GMKLENVLFN MDGTIELYLP 900
SGEVIKKNMA DFTGEAPQGN GENKPSENGK VSTGTVENQP TENKPADSLP 950
EAPNEKPVKP ENSTDNGMLN PEGNVGSDPM LDPALEEAPA VDPVQEKLEK 1000
FTASYGLGLD SVIFNMDGTI ELRLPSGEVI KKNLSDFIA (**SEQ ID NO: 2**) 1039

FIGURE 2

ATGAAAATCA ATAAAAAATA TCTAGCTGGG TCAGTAGCTA CACTTGTTTT AAGTGTCTGT 60
GCTTATGAAC TAGGTTTGCA TCAAGCTCAA ACTGTAAAAG AAAATAATCG TGTTTCCTAT 120
ATAGATGGAA AACAAGCGAC GCAAAAAACG GAGAATTTGA CTCCTGATGA GGTTAGCAAG 180
CGTGAAGGAA TCAACGCCGA ACAAATCGTC ATCAAGATTA CGGATCAAGG TTATGTGACC 240
TCTCATGGAG ACCATTATCA TTACTATAAT GGCAAGGTCC CTTATGATGC CATCATCAGT 300
GAAGAGCTCC TCATGAAAGA TCCGAATTAT CAGTTGAAGG ATTCAGACAT TGTCAATGAA 360
ATCAAGGGTG GTTATGTCAT TAAGGTAAAC GGTAAATACT ATGTTTACCT TAAGGATGCA 420
GCTCATGCGG ATAATGTCCG TACAAAAGAA GAAATCAATC GGCAAAAACA AGAACATAGT 480
CAGCATCGTG AAGGAGGGAC TTCAGCAAAC GATGGTGCGG TAGCCTTTGC ACGTTCACAG 540
GGACGCTACA CCACAGATGA TGGTTATATC TTCAATGCAT CTGATATCAT CGAAGATACG 600
GGCGATGCCT ATATCGTTCC TCATGGAGAT CATTACCATT ACATTCCTAA GAATGAGTTA 660
TCAGCTAGCG AGTTGGCTGC TGCAGAAGCC TTCCTATCTG GTCGGGAAAA TCTGTCAAAT 720
TTAAGAACCT ATCGCCGACA AAATAGCGAT AACACTCCAA GAACAAACTG GGTACCTTCT 780
GTAAGCAATC CAGGAACTAC AAATACTAAC ACAAGCAACA ACAGCAACAC TAACAGTCAA 840
GCAAGTCAAA GTAATGACAT TGATAGTCTC TTGAAACAGC TCTACAAACT GCCTTTGAGT 900
CAACGCCATG TAGAATCTGA TGGCCTTATT TTCGACCCAG CGCAAATCAC AAGTCGAACC 960
GCCAGAGGTG TAGCTGTCCC TCATGGTAAC CATTACCACT TTATCCCTTA TGAACAAATG 1020
TCTGAATTGG AAAAACGAAT TGCTCGTATT ATTCCCCTTC GTTATCGTTC AAACCATTGG 1080
GTACCAGATT CAAGACCAGA AGAACCAAGT CCACAACCGA CTCCAGAACC TAGTCCAAGT 1140
CCGCAACCTG CACCAAATCC TCAACCAGCT CCAAGCAATC CAATTGATGA GAAATTGGTC 1200
AAAGAAGCTG TTCGAAAAGT AGGCGATGGT TATGTCTTTG AGGAGAATGG AGTTTCTCGT 1260
TATATCCCAG CCAAGAATCT TTCAGCAGAA ACAGCAGCAG GCATTGATAG CAAACTGGCC 1320
AAGCAGGAAA GTTTATCTCA TAAGCTAGGA GCTAAGAAAA CTGACCTCCC ATCTAGTGAT 1380
CGAGAATTTT ACAATAAGGC TTATGACTTA CTAGCAAGAA TTCACCAAGA TTTACTTGAT 1440
AATAAAGGTC GACAAGTTGA TTTTGAGGCT TTGGATAACC TGTTGGAACG ACTCAAGGAT 1500
GTCTCAAGTG ATAAAGTCAA GTTAGTGGAT GATATTCTTG CCTTCTTAGC TCCGATTCGT 1560
CATCCAGAAC GTTTAGGAAA ACCAAATGCG CAAATTACCT ACACTGATGA TGAGATTCAA 1620
GTAGCCAAGT TGGCAGGCAA GTACACAACA GAAGACGGTT ATATCTTTGA TCCTCGTGAT 1680
ATAACCAGTG ATGAGGGGGA TGCCTATGTA ACTCCACATA TGACCCATAG CCACTGGATT 1740
AAAAAAGATA GTTTGTCTGA AGCTGAGAGA GCGGCAGCCC AGGCTTATGC TAAAGAGAAA 1800
GGTTTGACCC CTCCTTCGAC AGACCATCAG GATTCAGGAA ATACTGAGGC AAAAGGAGCA 1860
GAAGCTATCT ACAACCGCGT GAAAGCAGCT AAGAAGGTGC CACTTGATCG TATGCCTTAC 1920
AATCTTCAAT ATACTGTAGA AGTCAAAAAC GGTAGTTTAA TCATACCTCA TTATGACCAT 1980
TACCATAACA TCAAATTTGA GTGGTTTGAC GAAGGCCTTT ATGAGGCACC TAAGGGGTAT 2040
ACTCTTGAGG ATCTTTTGGC GACTGTCAAG TACTATGTCG AACATCCAAA CGAACGTCCG 2100
CATTCAGATA ATGGTTTTGG TAACGCTAGC GACCATGTTC AAAGAAACAA AAATGGTCAA 2160
GCTGATACCA ATCAAACGGA AAAACCAAGC GAGGAGAAAC CTCAGACAGA AAAACCTGAG 2220
GAAGAAACCC CTCGAGAAGA GAAACCACAA AGCGAGAAAC CAGAGTCTCC AAAACCAACA 2280
GAGGAACCAG AAGAAGAATC ACCAGAGGAA TCAGAAGAAC CTCAGGTCGA GACTGAAAAG 2340
GTTGAAGAAA AACTGAGAGA GGCTGAAGAT TTACTTGGAA AAATCCAGGA TCCAATTATC 2400
AAGTCCAATG CCAAAGAGAC TCTCACAGGA TTAAAAAATA ATTTACTATT TGGCACCCAG 2460
GACAACAATA CTATTATGGC AGAAGCTGAA AAACTATTGG CTTTATTAAA GGAGAGTAAG 2520
TAA **(SEQ ID NO: 3)** 2523

FIGURE 3

```
MKINKKYLAG SVATLVLSVC AYELGLHQAQ TVKENNRVSY IDGKQATQKT        50
ENLTPDEVSK REGINAEQIV IKITDQGYVT SHGDHYHYYN GKVPYDAIIS       100
EELLMKDPNY QLKDSDIVNE IKGGYVIKVN GKYYVYLKDA AHADNVRTKE       150
EINRQKQEHS QHREGGTSAN DGAVAFARSQ GRYTTDDGYI FNASDIIEDT       200
GDAYIVPHGD HYHYIPKNEL SASELAAAEA FLSGRENLSN LRTYRRQNSD       250
NTPRTNWVPS VSNPGTTNTN TSNNSNTNSQ ASQSNDIDSL LKQLYKLPLS       300
QRHVESDGLI FDPAQITSRT ARGVAVPHGN HYHFIPYEQM SELEKRIARI       350
IPLRYRSNHW VPDSRPEEPS PQPTPEPSPS PQPAPNPQPA PSNPIDEKLV       400
KEAVRKVGDG YVFEENGVSR YIPAKNLSAE TAAGIDSKLA KQESLSHKLG       450
AKKTDLPSSD REFYNKAYDL LARIHQDLLD NKGRQVDFEA LDNLLERLKD       500
VSSDKVKLVD DILAFLAPIR HPERLGKPNA QITYTDDEIQ VAKLAGKYTT       550
EDGYIFDPRD ITSDEGDAYV TPHMTHSHWI KKDSLSEAER AAAQAYAKEK       600
GLTPPSTDHQ DSGNTEAKGA EAIYNRVKAA KKVPLDRMPY NLQYTVEVKN       650
GSLIIPHYDH YHNIKFEWFD EGLYEAPKGY TLEDLLATVK YYVEHPNERP       700
HSDNGFGNAS DHVQRNKNGQ ADTNQTEKPS EEKPQTEKPE EETPREEKPQ       750
SEKPESPKPT EEPEEESPEE SEEPQVETEK VEEKLREAED LLGKIQDPII       800
KSNAKETLTG LKNNLLFGTQ DNNTIMAEAE KLLALLKESK (SEQ ID NO: 4)   840
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FIGURE 4

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ATGGAGAATA TAGACATGTT TAAATCAAAT CATGAGCGAA GAATGCGTTA TTCCATTCGT        60
AAATTTAGTG TAGGAGTAGC TAGCGTAGCT GTTGCCAGTC TTTTTATGGG AAGTGTTGTA       120
CATGCGACAG AGAAAGAGGG AAGTACCCAA GCAGCCACTT CTTTTAATAG GGGAAATGGA       180
AGTCAGGCAG AACAACGTGG AGAACTCGAT TTAGAACGAG ATAAGGCAAT GAAAGCGGTC       240
AGTGAATATG TAGGAAAAAT GGTGAGAGAT GCCTATGTAA AATCAGATAG AAAACGACAT       300
AAAAATACTG TAGCTCTAGT TAACCAGTTG GGAAACATTA AGAACAGGTA TTTGAATGAA       360
ATAGTTCATT CAACCTCAAA AAGCCAACTA CAGGAACTGA TGATGAAGAG TCAATCAGAA       420
GTAGATGAAG CTGTGTCTAA ATTTGAAAAG GACTCATTTT CTTCGTCAAG TTCAGGATCC       480
TCCACTAAAC CAGAAACTCC GCAGCCGGAA AATCCAGAGC ATCAAAAACC AACAACTCCA       540
TCTCCGGATA CCAAACCAAG CCCTCAACCA GAAGGCAAGA AACCAAGCGT ACCAGACATT       600
AATCAGGAAA AAGAAAAAGC TAAGCTTGCT GTAGTAACCT ACATGAGCAA GATTTTAGAT       660
GATATACAAA AACATCATCT GCAGAAAGAA AAACATCGTC AGATTGTTGC TCTTATTAAG       720
GAGCTTGATG AGCTTAAAAA GCAAGCTCTT TCTGAAATTG ATAATGTAAA TACCAAAGTA       780
GAAATTGAAA ATACAGTCCA CAAGATATTT GCAGACATGG ATGCAGTTGT GACTAAATTC       840
AAAAAAGGCT TAACTCAGGA CACACCAAAA GAACCAGGTA ACAAAAAACC ATCTGCTCCA       900
AAACCAGGTA TGCAACCAAG TCCTCAACCA GAGGTTAAAC CGCAGCTGGA AAAACCAAAA       960
CCAGAGGTTA AACCGCAACC AGAAAAACCA AAACCAGAGG TTAAACCGCA GCCGGAAAAA      1020
CCAAAACCAG AGGTTAAACC GCAGCCGGAA AAACCAAAAC CAGAGGTTAA ACCGCAGCCG      1080
GAAAAACCAA AACCAGAGGT TAAACCGCAG CCGGAAAAAC CAAAACCAGA GGTTAAACCG      1140
CAGCCGGAAA AACCAAAACC AGAGGTTAAA CCGCAGCCGG AAAAACCAAA ACCAGAGGTT      1200
AAACCGCAGC CGGAAAAACC AAAACCAGAG GTTAAACCGC AGCCGGAAAA ACCAAAACCA      1260
GAGGTTAAAC CGCAGCCGGA AAAACCAAAA CCAGAGGTTA AACCGCAACC AGAAAAACCA      1320
AAACCAGAGG TTAAACCGCA ACCAGAAAAA CCAAAACCAG ATAATAGCAA GCCACAAGCA      1380
GATGATAAGA AGCCATCAAC TACAAATAAT TTAAGCAAGG ACAAGCAACC TTCTAACCAA      1440
GCTTCAACAA ACGAAAAAGC AACAAATAAA CCGAAGAAGT CATTGCCATC AACTGGATCT      1500
ATTTCAAATC TAGCACTTGA AATTGCAGGT CTTCTTACCT TGGCGGGGGC AACCATTCTT      1560
GCTAAGAAAA GAATGAAATA G  (SEQ ID NO: 5)                                 1581
```

FIGURE 5

```
MENIDMFKSN HERRMRYSIR KFSVGVASVA VASLFMGSVV HATEKEGSTQ        50
AATSFNRGNG SQAEQRGELD LERDKAMKAV SEYVGKMVRD AYVKSDRKRH       100
KNTVALVNQL GNIKNRYLNE IVHSTSKSQL QELMMKSQSE VDEAVSKFEK       150
DSFSSSSSGS STKPETPQPE NPEHQKPTTP SPDTKPSPQP EGKKPSVPDI       200
NQEKEKAKLA VVTYMSKILD DIQKHHLQKE KHRQIVALIK ELDELKKQAL       250
SEIDNVNTKV EIENTVHKIF ADMDAVVTKF KKGLTQDTPK EPGNKKPSAP       300
KPGMQPSPQP EVKPQLEKPK PEVKPQPEKP KPEVKPQPEK PKPEVKPQPE       350
KPKPEVKPQP EKPKPEVKPQ PEKPKPEVKP QPEKPKPEVK PQPEKPKPEV       400
KPQPEKPKPE VKPQPEKPKP EVKPQPEKPK PEVKPQPEKP KPEVKPQPEK       450
PKPDNSKPQA DDKKPSTTNN LSKDKQPSNQ ASTNEKATNK PKKSLPSTGS       500
ISNLALEIAG LLTLAGATIL AKKRMK      (SEQ ID NO: 6)             526
```

FIGURE 6

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ATGAAATTTA GTAAAAAATA TATAGCAGCT GGATCAGCTG TTATCGTATC CTTGAGTCTA        60
TGTGCCTATG CACTAAACCA GCATCGTTCG CAGGAAAATA AGGACAATAA TCGTGTCTCT       120
TATGTGGATG GCAGCCAGTC AAGTCAGAAA AGTGAAAACT TGACACCAGA CCAGGTTAGC       180
CAGAAAGAAG GAATTCAGGC TGAGCAAATT GTAATCAAAA TTACAGATCA GGGCTATGTA       240
ACGTCACACG GTGACCACTA TCATTACTAT AATGGGAAAG TTCCTTATGA TGCCCTCTTT       300
AGTGAAGAAC TCTTGATGAA GGATCCAAAC TATCAACTTA AAGACGCTGA TATTGTCAAT       360
GAAGTCAAGG GTGGTTATAT CATCAAGGTC GATGGAAAAT ATTATGTCTA CCTGAAAGAT       420
GCAGCTCATG CTGATAATGT TCGAACTAAA GATGAAATCA ATCGTCAAAA ACAAGAACAT       480
GTCAAAGATA ATGAGAAGGT TAACTCTAAT GTTGCTGTAG CAAGGTCTCA GGGACGATAT       540
ACGACAAATG ATGGTTATGT CTTTAATCCA GCTGATATTA TCGAAGATAC GGGTAATGCT       600
TATATCGTTC CTCATGGAGG TCACTATCAC TACATTCCCA AAAGCGATTT ATCTGCTAGT       660
GAATTAGCAG CAGCTAAAGC ACATCTGGCT GGAAAAAATA TGCAACCGAG TCAGTTAAGC       720
TATTCTTCAA CAGCTAGTGA CAATAACACG CAATCTGTAG CAAAAGGATC AACTAGCAAG       780
CCAGCAAATA AATCTGAAAA TCTCCAGAGT CTTTTGAAGG AACTCTATGA TTCACCTAGC       840
GCCCAACGTT ACAGTGAATC AGATGGCCTG GTCTTTGACC CTGCTAAGAT TATCAGTCGT       900
ACACCAAATG GAGTTGCGAT TCCGCATGGC GACCATTACC ACTTTATTCC TTACAGCAAG       960
CTTTCTGCTT TAGAAGAAAA GATTGCCAGA ATGGTGCCTA TCAGTGGAAC TGGTTCTACA      1020
GTTTCTACAA ATGCAAAACC TAATGAAGTA GTGTCTAGTC TAGGCAGTCT TTCAAGCAAT      1080
CCTTCTTCTT TAACGACAAG TAAGGAGCTC TCTTCAGCAT CTGATGGTTA TATTTTTAAT      1140
CCAAAAGATA TCGTTGAAGA AACGGCTACA GCTTATATTG TAAGACATGG TGATCATTTC      1200
CATTACATTC CAAAATCAAA TCAAATTGGG CAACCGACTC TTCCAAACAA TAGTCTAGCA      1260
ACACCTTCTC CATCTCTTCC AATCAATCCA GGAACTTCAC ATGAGAAACA TGAAGAAGAT      1320
GGATACGGAT TTGATGCTAA TCGTATTATC GCTGAAGATG AATCAGGTTT TGTCATGAGT      1380
CACGGAGACC ACAATCATTA TTTCTTCAAG AAGGACTTGA CAGAAGAGCA AATTAAGGTG      1440
CGCAAAAACA TTTAG    (SEQ ID NO: 7)                                      1455
```

FIGURE 7

```
MKFSKKYIAA GSAVIVSLSL CAYALNQHRS QENKDNNRVS YVDGSQSSQK        50
SENLTPDQVS QKEGIQAEQI VIKITDQGYV TSHGDHYHYY NGKVPYDALF       100
SEELLMKDPN YQLKDADIVN EVKGGYIIKV DGKYYVYLKD AAHADNVRTK       150
DEINRQKQEH VKDNEKVNSN VAVARSQGRY TTNDGYVFNP ADIIEDTGNA       200
YIVPHGGHYH YIPKSDLSAS ELAAAKAHLA GKNMQPSQLS YSSTASDNNT       250
QSVAKGSTSK PANKSENLQS LLKELYDSPS AQRYSESDGL VFDPAKIISR       300
TPNGVAIPHG DHYHFIPYSK LSALEEKIAR MVPISGTGST VSTNAKPNEV       350
VSSLGSLSSN PSSLTTSKEL SSASDGYIFN PKDIVEETAT AYIVRHGDHF       400
HYIPKSNQIG QPTLPNNSLA TPSPSLPINP GTSHEKHEED GYGFDANRII       450
AEDESGFVMS HGDHNHYFFK KDLTEEQIKV RKNI    (SEQ ID NO: 8)       484
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FIGURE 8

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ATGAAAGATT TAGATAAAAA AATCGAAGAA AAAATTGCTG GCATTATGAA ACAATATGGT        60
GTCAAACGTG AAAGTATTGT CGTGAATAAA GAAAAAAATG CGATTATTTA TCCGCATGGA       120
GATCACCATC ATGCAGATCC GATTGATGAA CATAAACCGG TTGGAATTGG TCATTCTCAC       180
AGTAACTATG AACTGTTTAA ACCCGAAGAA GGAGTTGCTA AAAAAGAAGG GAATAAAGTT       240
TATACTGGAG AAGAATTAAC GAATGTTGTT AATTTGTTAA AAAATAGTAC GTTTAATAAT       300
CAAAACTTTA CTCTAGCCAA TGGTCAAAAA CGCGTTTCTT TTAGTTTTCC GCCTGAATTG       360
GAGAAAAAAT TAGGTATCAA TATGCTAGTA AAATTAATAA CACCAGATGG AAAAGTATTG       420
GAGAAAGTAT CTGGTAAAGT ATTTGGAGAA GGAGTAGGGA ATATTGCAAA CTTTGAATTA       480
GATCAACCTT ATTTACCAGG ACAAACATTT AAGTATACTA TCGCTTCAAA AGATTATCCA       540
GAAGTAAGTT ATGATGGTAC ATTTACAGTT CCAACCTCTT TAGCTTACAA AATGGCCAGT       600
CAAACGATTT TCTATCCTTT CCATGCAGGG GATACTTATT TAAGAGTGAA CCCTCAATTT       660
GCAGTGCCTA AAGGAACTGA TGCTTTAGTC AGAGTGTTTG ATGAATTTCA TGGAAATGCT       720
TATTTAGAAA ATAACTATAA AGTTGGTGAA ATCAAATTAC CGATTCCGAA ATTAAACCAA       780
GGAACAACCA GAACGGCCGG AAATAAAATT CCTGTAACCT TCATGGCAAA TGCTTATTTG       840
GACAATCAAT CGACTTATAT TGTGGAAGTA CCTATCTTGG AAAAAGAAAA TCAAACTGAT       900
AAACCAAGTA TTCTACCACA ATTTAAAAGG AATAAAGCAC AAGAAAACTC AAAACTTGAT       960
GAAAAGGTAG AAGAACCAAA GACTAGTGAG AAGGTAGAAA AAGAAAAACT TTCTGAAACT      1020
GGGAATAGTA CTAGTAATTC AACGTTAGAA GAAGTTCCTA CAGTGGATCC TGTACAAGAA      1080
AAAGTAGCAA AATTTGCTGA AAGTTATGGG ATGAAGCTAG AAAATGTCTT GTTTAATATG      1140
GACGGAACAA TTGAATTATA TTTACCATCA GGAGAAGTCA TTAAAAAGAA TATGGCAGAT      1200
TTTACAGGAG AAGCACCTCA AGGAAATGGT GAAAATAAAC CATCTGAAAA TGGAAAAGTA      1260
TCTACTGGAA CAGTTGAGAA CCAACCAACA GAAAATAAAC CAGCAGATTC TTTACCAGAG      1320
GCACCAAACG AAAAACCTGT AAAACCAGAA AACTCAACGG ATAATGGAAT GTTGAATCCA      1380
GAAGGGAATG TGGGGAGTGA CCCTATGTTA GATCCAGCAT TAGAGGAAGC TCCAGCAGTA      1440
GATCCTGTAC AAGAAAAATT AGAAAAATTT ACAGCTAGTT ACGGATTAGG CTTAGATAGT      1500
GTTATATTCA ATATGGATGG AACGATTGAA TTAAGATTGC CAAGTGGAGA AGTGATAAAA      1560
AAGAATTTAT CTGATTTCAT AGCGTAA     (SEQ ID NO: 9)                       1587
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FIGURE 9

MKDLDKKIEE KIAGIMKQYG VKRESIVVNK EKNAIIYPHG DHHHADPIDE 50
HKPVGIGHSH SNYELFKPEE GVAKKEGNKV YTGEELTNVV NLLKNSTFNN 100
QNFTLANGQK RVSFSFPPEL EKKLGINMLV KLITPDGKVL EKVSGKVFGE 150
GVGNIANFEL DQPYLPGQTF KYTIASKDYP EVSYDGTFTV PTSLAYKMAS 200
QTIFYPFHAG DTYLRVNPQF AVPKGTDALV RVFDEFHGNA YLENNYKVGE 250
IKLPIPKLNQ GTTRTAGNKI PVTFMANAYL DNQSTYIVEV PILEKENQTD 300
KPSILPQFKR NKAQENSKLD EKVEEPKTSE KVEKEKLSET GNSTSNSTLE 350
EVPTVDPVQE KVAKFAESYG MKLENVLFNM DGTIELYLPS GEVIKKNMAD 400
FTGEAPQGNG ENKPSENGKV STGTVENQPT ENKPADSLPE APNEKPVKPE 450
NSTDNGMLNP EGNVGSDPML DPALEEAPAV DPVQEKLEKF TASYGLGLDS 500
VIFNMDGTIE LRLPSGEVIK KNLSDFIA (**SEQ ID NO: 10**) 528

FIGURE 10

```
BVH3 WU2          1 CAYALNQHRSQENKDNNRVSYVDGSQSSQKSENLTPDQVSQKEGIQAEQIVIKITDQGYV   60
BVH3 RX1          1 CAYALNQHRSQENKDNNRVSYVDGSQSSQKSENLTPDQVSQKEGIQAEQIVIKITDQGYV   60
BVH3 JNR7/87      1 CAYALNQHRSQENKDNNRVSYVDGSQSSQKSENLTPDQVSQKEGIQAEQIVIKITDQGYV   60
BVH3 SP64         1 CAYALNQHRSQENKDNNRVSYVDGSQSSQKSENLTPDQVSQKEGIQAEQIVIKITDQGYV   60
BVH3 P4241        1 CAYALNQHRSQENKDNNRVSYVDGSQSSQKSENLTPDQVSQKEGIQAEQIVIKITDQGYV   60
BVH3 A66          1 CAYALNQHRSQENKDNNRVSYVDGSQSSQKSENLTPDQVSQKEGIQAEQIVIKITDQGYV   60
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BVH3 WU2         61 TSHGDHYHYYNGKVPYDALFSEELLMKDPNYQLKDADIVNEVKGGYIIKVDGKYYVYLKD  120
BVH3 RX1         61 TSHGDHYHYYNGKVPYDALFSEELLMKDPNYQLKDADIVNEVKGGYIIKVDGKYYVYLKD  120
BVH3 JNR7/87     61 TSHGDHYHYYNGKVPYDALFSEELLMKDPNYQLKDADIVNEVKGGYIIKVDGKYYVYLKD  120
BVH3 SP64        61 TSHGDHYHYYNGKVPYDALFSEELLMKDPNYQLKDADIVNEVKGGYIIKVDGKYYVYLKD  120
BVH3 P4241       61 TSHGDHYHYYNGKVPYDALFSEELLMKDPNYQLKDADIVNEVKGGYIIKVDGKYYVYLKD  120
BVH3 A66         61 TSHGDHYHYYNGKVPYDALFSEELLMKDPNYQLKDADIVNEVKGGYIIKVDGKYYVYLKD  120
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BVH3 WU2        121 AAHADNVRTKDEINRQKQEHVKDNEKVNSNVAVARSQGRYTTNDGYVFNPADIIEDTGNA  180
BVH3 RX1        121 AAHADNVRTKDEINRQKQEHVKDNEKVNSNVAVARSQGRYTTNDGYVFNPADIIEDTGNA  180
BVH3 JNR7/87    121 AAHADNVRTKDEINRQKQEHVKDNEKVNSNVAVARSQGRYTTNDGYVFNPADIIEDTGNA  180
BVH3 SP64       121 AAHADNVRTKDEINRQKQEHVKDNEKVNSNVAVARSQGRYTTNDGYVFNPADIIEDTGNA  180
BVH3 P4241      121 AAHADNVRTKDEINRQKQEHVKDNEKVNSNVAVARSQGRYTTNDGYVFNPADIIEDTGNA  180
BVH3 A66        121 AAHADNVRTKDEINRQKQEHVKDNEKVNSNVAVARSQGRYTTNDGYVFNPADIIEDTGNA  180
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BVH3 WU2        181 YIVPHRGHYHYIPKSDLSASELAAAKAHLAGKNMQPSQLSYSSTASDNNTQSVAKGSTSK  240
BVH3 RX1        181 YIVPHGGHYHYIPKSDLSASELAAAKAHLAGKNMQPSQLSYSSTASDNNTQSVAKGSTSK  240
BVH3 JNR7/87    181 YIVPHGGHYHYIPKSDLSASELAAAKAHLAGKNMQPSQLSYSSTASDNNTQSVAKGSTSK  240
BVH3 SP64       181 YIVPHGGHYHYIPKSDLSASELAAAKAHLAGKNMQPSQLSYSSTASDNNTQSVAKGSTSK  240
BVH3 P4241      181 YIVPHRGHYHYIPKSDLSASELAAAKAHLAGKNMQPSQLSYSSTASDNNTQSVAKGSTSK  240
BVH3 A66        181 YIVPHRGHYHYIPKSDLSASELAAAKAHLAGKNMQPSQLSYSSTASDNNTQSVAKGSTSK  240
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BVH3 WU2        241 PANKSENLQSLLKELYDSPSAQRYSESDGLVFDPAKIISRTPNGVAIPHGDHYHFIPYSK  300
BVH3 RX1        241 PANKSENLQSLLKELYDSPSAQRYSESDGLVFDPAKIISRTPNGVAIPHGDHYHFIPYSK  300
BVH3 JNR7/87    241 PANKSENLQSLLKELYDSPSAQRYSESDGLVFDPAKIISRTPNGVAIPHGDHYHFIPYSK  300
BVH3 SP64       241 PANKSENLQSLLKELYDSPSAQRYSESDGLVFDPAKIISRTPNGVAIPHGDHYHFIPYSK  300
BVH3 P4241      241 PANKSENLQSLLKELYDSPSAQRYSESDGLVFDPAKIISRTPNGVAIPHGDHYHFIPYSK  300
BVH3 A66        241 PANKSENLQSLLKELYDSPSAQRYSESDGLVFDPAKIISRTPNGVAIPHGDHYHFIPYSK  300
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BVH3 WU2        301 LSALEEKIARMVPISGTGSTVSTNAKPNEVVSSLGSLSSNPSSLTTSKELSSASDGYIFN  360
BVH3 RX1        301 LSALEEKIARRVPISGTGSTVSTNAKPNEVVSSLGSLSSNPSSLTTSKELSSASDGYIFN  360
BVH3 JNR7/87    301 LSALEEKIARMVPISGTGSTVSTNAKPNEVVSSLGSLSSNPSSLTTSKELSSASDGYIFN  360
BVH3 SP64       301 LSALEEKIARMVPISGTGSTVSTNAKPNEVVSSLGSLSSNPSSLTTSKELSSASDGYIFN  360
BVH3 P4241      301 LSALEEKIARMVPISGTGSTVSTNAKPNEVVSSLGSLSSNPSSLTTSKELSSASDGYIFN  360
BVH3 A66        301 LSALEEKIARMVPISGTGSTVSTNAKPNEVVSSLGSLSSNPSSLTTSKELSSASDGYIFN  360
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BVH3 WU2        361 PKDIVEETATAYIVRHGDHFHYIPKSNQIGQPTLPNNSLATPSPSLPINPGTSHEKHEED  420
BVH3 RX1        361 PKDIVEETATAYIVRHGDHFHYIPKSNQIGQPTLPNNSLATPSPSLPINPGISHEKHEED  420
BVH3 JNR7/87    361 PKDIVEETATAYIVRHGDHFHYIPKSNQIGQPTLPNNSLATPSPSLPINPGTSHEKHEED  420
BVH3 SP64       361 PKDIVEETATAYIVRHGDHFHYIPKSNQIGQPTLPNNSLATPSPSLPINPGTSHEKHEED  420
BVH3 P4241      361 PKDIVEETATAYIVRHGDHFHYIPKSNQIGQPTLPNNSLATPSPSLPINPGTSHEKHEED  420
BVH3 A66        361 PKDIVEETATAYIVRHGDHFHYIPKSNQIGQPTLPNNSLATPSPSLPINPGTSHEKHEED  420
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BVH3 WU2        421 GYGFDANRIIAEDESGFVMSHGDHNHYFFKKDLTEEQIKAAQKHLEEVKTSHNGLDSLSS  480
BVH3 RX1        421 GYGFDANRIIAEDESGFIMSHGNHNHYFFKKDLTEEQIKAAQKHLEEVKTSHNGLDSLSS  480
BVH3 JNR7/87    421 GYGFDANRIIAEDESGFVMSHGDHNHYFFKKDLTEEQIKAAQKHLEEVKTSHNGLDSLSS  480
BVH3 SP64       421 GYGFDANRIIAEDESGFVMSHGDHNHYFFKKDLTEEQIKAAQKHLEEVKTSHNGLDSLSS  480
BVH3 P4241      421 GYGFDANRIIAEDESGFVMSHGDHNHYFFKKDLTEEQIKAAQKHLEEVKTSHNGLDSLSS  480
BVH3 A66        421 GYGFDANRIIAEDESGFVMSHGDHNHYFFKKDLTEEQIKAAQKHLEEVKTSHNGLDSLSS  480
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BVH3 WU2        481 HEQDYPSNAKEMKDLDKKIEEKIAGIMKQYGVKRESIVVNKEKNAIIYPHGDHHHADPID  540
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BVH3 RX1        481 HEQDYPGNAKEMKDLDKKIEEKIAGIMKQYGVKRESIVVNKEKNAIIYPHGDHHHADPID  540
BVH3 JNR7/87    481 HEQDYPSNAKEMKDLDKKIEEKIAGIMKQYGVKRESIVVNKEKNAIIYPHGDHHHADPID  540
BVH3 SP64       481 HEQDYPGNAKEMKDLDKKIEEKIAGIMKQYGVKRESIVVNKEKNAIIYPHGDHHHADPID  540
BVH3 P4241      481 HEQDYPSNAKEMKDLDKKIEEKIAGIMKQYGVKRESIVVNKEKNAIIYPHGDHHHADPID  540
BVH3 A66        481 HEQDYPSNAKEMKDLDKKIEEKIAGIMKQYGVKRESIVVNKEKNAIIYPHGDHHHADPID  540
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BVH3 WU2        541 EHKPVGIGHSHSNYELFKPEEGVAKKEGNKVYTGEELTNVVNLLKNSTFNNQNFTLANGQ  600
BVH3 RX1        541 EHKPVGIGHSHSNYELFKPEEGVAKKEGNKVYTGEELTNVVNLLKNSTFNNQNFTLANGQ  600
BVH3 JNR7/87    541 EHKPVGIGHSHSNYELFKPEEGVAKKEGNKVYTGEELTNVVNLLKNSTFNNQNFTLANGQ  600
BVH3 SP64       541 EHKPVGIGHSHSNYELFKPEEGVAKKEGNKVYTGEELTNVVNLLKNSTFNNQNFTLANGQ  600
BVH3 P4241      541 EHKPVGIGHSHSNYELFKPEEGVAKKEGNKVYTGEELTNVVNLLKNSTFNNQNFTLANGQ  600
BVH3 A66        541 EHKPVGIGHSHSNYELFKPEEGVAKKEGNKVYTGEELTNVVNLLKNSTFNNQNFTLANGQ  600
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BVH3 WU2        601 KRVSFSFPPELEKKLGINMLVKLITPDGKVLEKVSGKVFGEGVGNIANFELDQPYLPGQT  660
BVH3 RX1        601 KRVSFSFPPELEKKLGINMLVKLITPDGKVLEKVSGKVFGEGVGNIANFELDQPYLPGQT  660
BVH3 JNR7/87    601 KRVSFSFPPELEKKLGINMLVKLITPDGKVLEKVSGKVFGEGVGNIANFELDQPYLPGQT  660
BVH3 SP64       601 KRVSFSFPPELEKKLGINMLVKLITPDGKVLEKVSGKVFGEGVGNIANFELDQPYLPGQT  660
BVH3 P4241      601 KRVSFSFPPELEKKLGINMLVKLITPDGKVLEKVSGKVFGEGVGNIANFELDQPYLPGQT  660
BVH3 A66        601 KRVSFSFPPELEKKLGINMLVKLITPDGKVLEKVSGKVFGEGVGNIANFELDQPYLPGQT  660
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BVH3 WU2        661 FKYTIASKDYPEVSYDGTFTVPTSLAYKMASQTIFYPFHAGDTYLRVNPQFAVPKGTDAL  720
BVH3 RX1        661 FKYTIASKDYPEVSYDGTFTVPTSLAYKMASQTIFYPFHAGDTYLRVNPQFAVPKGTDAL  720
BVH3 JNR7/87    661 FKYTIASKDYPEVSYDGTFTVPTSLAYKMASQTIFYPFHAGDTYLRVNPQFAVPKGTDAL  720
BVH3 SP64       661 FKYTIASKDYPEVSYDGTFTVPTSLAYKMASQTIFYPFHAGDTYLRVNPQFAVPKGTDAL  720
BVH3 P4241      661 FKYTIASKDYPEVSYDGTFTVPTSLAYKMASQTIFYPFHAGDTYLRVNPQFAVPKGTDAL  720
BVH3 A66        661 FKYTIASKDYPEVSYDGTFTVPTSLAYKMASQTIFYPFHAGDTYLRVNPQFAVPKGTDAL  720
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BVH3 WU2        721 VRVFDEFHGNAYLENNYKVGEIKLPIPKLNQGTTRTAGNKIPVTFMANAYLDNQSTYIVE  780
BVH3 RX1        721 VRVFDEFHGNAYLENNYKVGEIKLPIPKLNQGTTRTAGNKIPVTFMANAYLDNQSTYIVE  780
BVH3 JNR7/87    721 VRVFDEFHGNAYLENNYKVGEIKLPIPKLNQGTTRTAGNKIPVTFMANAYLDNQSTYIVE  780
BVH3 SP64       721 VRVFDEFHGNAYLENNYKVGEIKLPIPKLNQGTTRTAGNKIPVTFMANAYLDNQSTYIVE  780
BVH3 P4241      721 VRVFDEFHGNAYLENNYKVGEIKLPIPKLNQGTTRTAGNKIPVTFMANAYLDNQSTYIVE  780
BVH3 A66        721 VRVFDEFHGNAYLENNYKVGEIKLPIPKLNQGTTRTAGNKIPVTFMANAYLDNQSTYIVE  780
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BVH3 WU2        781 VPILEKENQTDKPSILPQFKRNKAQENSKFDEKVEEPKTSEKVEKEKLSETGNSTSNSTL  840
BVH3 RX1        781 VPILEKENQTDKPSILPQFKRNKAQENSKLDEKVEEPKTSEKVEKEKLSETGNSTSNSTL  840
BVH3 JNR7/87    781 VPILEKENQTDKPSILPQFKRNKAQENLKLDEKVEEPKTSEKVEKEKLSETGNSTSNSTL  840
BVH3 SP64       781 VPILEKENQTDKPSILPQFKRNKAQENSKLDEKVEEPKTSEKVEKEKLSETGNSTSNSTL  840
BVH3 P4241      781 VPILEKENQTDKPSILPQFKRNKAQENSKFDEKVEEPKTSEKVEKEKLSETGNSTSNSTL  840
BVH3 A66        781 VPILEKENQTDKPSILPQFKRNKAQENSKFDEKVEEPKTSEKVEKEKLSETGNSTSNSTL  840
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BVH3 WU2        841 EEVPTVDPVQEKVAKFAESYGMKLENVLFNMDGTIELYLPSGEVIKKNMADFTGEAPQGN  900
BVH3 RX1        841 EEVPTVDPVQEKVAKFAESYGMKLENVLFNMDGTIELYLPSGEVIKKNMADFTGEAPQGN  900
BVH3 JNR7/87    841 EEVPTVDPVQEKVAKFAESYGMKLENVLFNMDGTIELYLPSGEVIKKNMADFTGEAPQGN  900
BVH3 SP64       841 EEVPTVDPVQEKVAKFAESYGMKLENVLFNMDGTIELYLPSGEVIKKNMADFTGEAPQGN  900
BVH3 P4241      841 EEVPTVDPVQEKVAKFAESYGMKLENVLFNMDGTIELYLPSGEVIKKNMADFTGEAPQGN  900
BVH3 A66        841 EEVPTVDPVQEKVAKFAESYGMKLENVLFNMDGTIELYLPSGEVIKKNMADFTGEAPQGN  900
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BVH3 WU2        901 GENKPSENGKVSTGTVENQPTENKPADSLPEAPNEKPVKPENSTDNGMLNPEGNVGSDPM  960
BVH3 RX1        901 GENKPSENGKVSTGTVENQPTENKPADSLPEAPNEKPVKPENSTDNGMLNPEGNVGSDPM  960
BVH3 JNR7/87    901 GENKPSENGKVSTGTVENQPTENKPADSLPEAPNEKPVKPENSTDNGMLNPEGNVGSDPM  960
BVH3 SP64       901 GENKPSENGKVSTGTVENQPTENKPADSLPEAPNEKPVKPENSTDNGMLNPEGNVGSDPM  960
BVH3 P4241      901 GENKPSENGKVSTGTVENQPTENKPADSLPEAPNEKPVKPENSTDNGMLNPEGNVGSDPM  960
BVH3 A66        901 GENKPSENGKVSTGTVENQPTENKPADSLPEAPNEKPVKPENSTDNGMLNPEGNVGSDPM  960
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BVH3 WU2        961 LDPALEEAPAVDPVQEKLEKFTASYGLGLDSVIFNMDGTIELRLPSGEVIKKNLSDLIA 1019
BVH3 RX1        961 LDPALEEAPAVDPVQEKLEKFTASYGLGLDSVIFNMDGTIELRLPSGEVIKKNLSDLIA 1019
BVH3 JNR7/87    961 LDPALEEAPAVDPVQEKLEKFTASYGLGLDSVIFNMDGTIELRLPSGEVIKKNLSDLIA 1019
BVH3 SP64       961 LDPALEEAPAVDPVQEKLEKFTASYGLGLDSVIFNMDGTIELRLPSGEVIKKNLSDFIA 1019
BVH3 P4241      961 LDPALEEAPAVDPVQEKLEKFTASYGLGLDSVIFNMDGTIELRLPSGEVIKKNLSDLIA 1019
BVH3 A66        961 LDPALEEAPAVDPVQEKLEKFTASYGLGLDSVIFNMDGTIELRLPSGEVIKKNLSDLIA 1019
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FIGURE 11

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BVH11-2 SP64       1 CSYELGRHQAGQVKKESNRVSYIDGDQAGQKAENLTPDEVSKREGINAEQIVIKITDQGY  60
BVH11-2 JNR7/87    1 CSYELGRHQAGQVKKESNRVSYIDGDQAGQKAENLTPDEVSKREGINAEQIVIKITDQGY  60
BVH11-2 P4241      1 CSYELGRHQAGQDKKESNRVAYIDGDQAGQKAENLTPDEVSKREGINAEQIVIKITDQGY  60
BVH11-2 A66        1 CSYELGRHQAGQDKKESNRVAYIDGDQAGQKAENLTPDEVSKREGINAEQIVIKITDQGY  60
BVH11-2 WU2        1 CSYELGRHQAGQDKKESNRVAYIDGDQAGQKAENLTPDEVSKREGINAEQIVIKITDQGY  60
BVH11-2 Rx1        1 CSYELGRHQAGQVKKESNRVSYIDGDQAGQKAENLTPDEVSKREGINAEQIVIKITDQGY  60
BVH11 P4241        1 CSYELGRHQAGQDKKESNRVAYIDGDQAGQKAENLTPDEVSKREGINAEQIVIKITDQGY  60
BVH11 WU2          1 CSYELGRHQAGQDKKESNRVAYIDGDQAGQKAENLTPDEVSKREGINAEQIVIKITDQGY  60
BVH11 A66          1 CSYELGRHQAGQDKKESNRVAYIDGDQAGQKAENLTPDEVSKREGINAEQIVIKITDQGY  60
BVH11 Rx1          1 CSYELGRHQAGQVKKESNRVSYIDGDQAGQKAENLTPDEVSKREGINAEQIVIKITDQGY  60
BVH11 JNR7/87      1 CSYELGRHQAGQDKKESNRVAYIDGDQAGQKAENLTPDEVSKREGINAEQIVIKITDQGY  60
BVH11 SP63         1 CSYELGRHQAGQVKKESNRVSYIDGDQAGQKAENLTPDEVSKREGINAEQIVIKITDQGY  60
BVH11  SP64        1 CAYELGLHQA-QTVKENNRVSYIDGKQATQKTENLTPDEVSKREGINAEQIVIKITDQGY  59
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BVH11-2 SP64      61 VTSHGDHYHYYNGKVPYDAIISEELLMKDPNYQLKDSDIVNEIKGGYVIKVDGKYYVYLK 120
BVH11-2 JNR7/87   61 VTSHGDHYHYYNGKVPYDAIISEELLMKDPNYQLKDSDIVNEIKGGYVIKVDGKYYVYLK 120
BVH11-2 P4241     61 VTSHGDHYHYYNGKVPYDAIISEELLMKDPNYQLKDSDIVNEIKGGYVIKVNGKYYVYLK 120
BVH11-2 A66       61 VTSHGDHYHYYNGKVPYDAIISEELLMKDPNYQLKDSDIVNEIKGGYVIKVNGKYYVYLK 120
BVH11-2 WU2       61 VTSHGDHYHYYNGKVPYDAIISEELLMKDPNYQLKDSDIVNEIKGGYVIKVNGKYYVYLK 120
BVH11-2 Rx1       61 VTSHGDHYHYYNGKVPYDAIISEELLMKDPNYQLKDSDIVNEIKGGYVIKVDGKYYVYLK 120
BVH11 P4241       61 VTSHGDHYHYYNGKVPYDAIISEELLMKDPNYQLKDSDIVNEIKGGYVIKVNGKYYVYLK 120
BVH11 WU2         61 VTSHGDHYHYYNGKVPYDAIISEELLMKDPNYQLKDSDIVNEIKGGYVIKVNGKYYGYLK 120
BVH11 A66         61 VTSHGDHYHYYNGKVPYDAIISEELLMKDPNYQLKDSDIVNEIKGGYVIKVNGKYYVYLK 120
BVH11 Rx1         61 VTSHGDHYHYYNGKVPYDAIISEELLMKDPNYQLKDSDIVNEIKGGYVIKVDGKYYVYLK 120
BVH11 JNR7/87     61 VTSHGDHYHYYNGKVPYDAIISEELLMKDPNYQLKDSDIVNEIKGGYVIKVNGKYYVYLK 120
BVH11 SP63        61 VTSHGDHYHYYNGKVPYDAIISEELLMKDPNYQLKDSDIVNEIKGGYVIKVDGKYYVYLK 120
BVH11  SP64       60 VTSHGDHYHYYNGKVPYDAIISEELLMKDPNYQLKDSDIVNEIKGGYVIKVNGKYYVYLK 119
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BVH11-2 SP64     121 DAAHADNIRTKEEIKRQKQEHSHNHNSRA---DNAVAAARAQGRYTTDDGYIFNASDIIE 177
BVH11-2 JNR7/87  121 DAAHADNIRTKEEIKRQKQEHSHNHGGGSN--DQAVVAARAQGRYTTDDGYIFNASDIIE 178
BVH11-2 P4241    121 DAAHADNIRTKEEIKRQKQEHSHNHGGGSN--DQAVVAARAQGRYTTDDGYIFNASDIIE 178
BVH11-2 A66      121 DAAHADNIRTKEEIKRQRQEHSHNHGGGSN--DQAVVAARAQGRYTTDDGYIFNASDIIE 178
BVH11-2 WU2      121 DAAHADNIRTKEEIKRQKQEHSHNHGGGSN--DQAVVAARAQGRYTTDDGYIFNASDIIE 178
BVH11-2 Rx1      121 DAAHADNIRTKEEIKRQKQERSHNHNSRA---DNAVAAARAQGRYTTDDGYIFNASDIIE 177
BVH11 P4241      121 DAAHADNIRTKEEIKRQKQEHSHNHGGGSN--DQAVVAARAQGRYTTDDGYIFNASDIIE 178
BVH11 WU2        121 DAAHADNIRTKEEIKRQKQEHSHNHGGGSN--DQAVVAARAQGRYTTDDGYIFNASDIIE 178
BVH11 A66        121 DAAHADNIRTKEEIKRQKQEHSHNHGGGSN--DQAVVAARAQGRYTTDDGYIFNASDIIE 178
BVH11 Rx1        121 DAAHADNIRTKEEIKRQKQERSHNHNSRA---DNAVAAARAQGRYTTDDGYIFNASDIIE 177
BVH11 JNR7/87    121 DAAHADNIRTKEEIKRQKQERSHNHNSRA---DNAVAAARAQGRYTTDDGYIFNASDIIE 177
BVH11 SP63       121 DAAHADNIRTKEEIKRQKQERSHNHNSRA---DNAVAAARAQGRYTTDDGYIFNASDIIE 177
BVH11  SP64      120 DAAHADNVRTKEEINRQKQEHSQHREGGTSANDGAVAFARSQGRYTTDDGYIFNASDIIE 179
                     *******.****** **.**.*...   .   * **  **.********************

BVH11-2 SP64     178 DTGDAYIVPHGDHYHYIPKNELSASELAAAEAYWNGKQGSRPSSSSSYNANPVQPRLSEN 237
BVH11-2 JNR7/87  179 DTGDAYIVPHGDHYHYIPKNELSASELAAAEAYWNGKQGSRPSSSSSYNANPAQPRLSEN 238
BVH11-2 P4241    179 DTGDAYIVPHGNHFHYIPKSDLSASELAAAQAYWNGKQGSRPSSSSSHNANPAQPRLSEN 238
BVH11-2 A66      179 DTGDAYIVPHGNHFHYIPKSDLSASELAAAQAYWNGKQGSRPSSSSSHNANPAQPRLSEN 238
BVH11-2 WU2      179 DTGDAYIVPRGNHFHYIPKSDLSASELAAAQAYWNGKQGSRPSSSSSHNANPAQPRLSEN 238
BVH11-2 Rx1      178 DTGDAYIVPHGDHYHYIPKSDLSASELAAAQAYWNGKQGSRPSSSSSHNANPAQPRLSEN 237
BVH11 P4241      179 DTGDAYIVPHGNHFHYIPKSDLSASELAAAQAYWNGKQGSRPSSSSSHNANPAQPRLSEN 238
BVH11 WU2        179 DTGDAYIVPHGNHFHYIPKSDLSASELAAAQAYWNGKQGSRPSSSSSHNANPAQPRLSEN 238
BVH11 A66        179 DTGDAYIVPHGNHFHYIPKSDLSASELAAAQAYWNGKQGSRPSSSSSHNANPAQPRLSEN 238
BVH11 Rx1        178 DTGDAYIVPHGDHYHYIPKSDLSASELAAAQAYWNGKQGSRPSSSSSHNANPAQPRLSEN 237
BVH11 JNR7/87    178 DTGDAYIVPHGDHYHYIPKNELSASELAAAEAYWNGKQGSRPSSSSSYNANPAQPRLSEN 237
BVH11 SP63       178 DTGDAYIVPHGNHFHYIPKSDLSASELAAAQAYWNGKQGSRPSSSSSHNANPAQPRLSEN 237
BVH11  SP64      180 DTGDAYIVPHGDHYHYIPKNELSASELAAAEAFLSGRENLSNLRTYRRQNSDNTPRTNWV 239
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BVH11-2 SP64     238 HNLTVTPTYHQN------------QGENISSLLRELYAKPLSERHVESDGLIFDPAQITS 285
BVH11-2 JNR7/87  239 HNLTVTPTYHQN------------QGENISSLLRELYAKPLSERHVESDGLIFDPAQITS 286
BVH11-2 P4241    239 HNLTVTPTYHQN------------QGENISSLLRELYAKPLSERHVESDGLIFDPAQITS 286
BVH11-2 A66      239 HNLTVTPTYHQN------------QGENISSLLRELYAKPLSERHVESDGLIFDPAQITS 286
BVH11-2 WU2      239 HNLTVTPTYHQN------------QGENISSLLRELYAKPLSERRVESDGLIFDPAQITS 286
BVH11-2 Rx1      238 HNLTVTPTYHQN------------QGENISSLLRELYAKPLSERHVESDGLIFDPAQITS 285
BVH11 P4241      239 HNLTVTPTYHQN------------QGENISSLLRELYAKPLSERHVESDGLIFDPAQITS 286
BVH11 WU2        239 HNLTVTPTYHQN------------QGENISSLLRELYAKPLSERHVESDGLIFDPAQITS 286
BVH11 A66        239 HNLTVTPTYHQN------------QGENISSLLRELYAKPLSERHVESDGLIFDPAQITS 286
BVH11 Rx1        238 HNLTVTPTYHQN------------QGENISSLLRELYAKPLSERHVESDGLIFDPAQITS 285
BVH11 JNR7/87    238 HNLTVTPTYHQN------------QGENISSLLRELYAKPLSERHVESDGLIFDPAQITS 285
BVH11 SP63       238 HNLTVTPTYHQN------------QGENISSLLRELYAKPLSERHVESDGLIFDPAQITS 285
BVH11  SP64      240 PSVSNPGTTNTNTSNNSNTNSQASQSNDIDSLLKQLYKLPLSQRHVESDGLIFDPAQITS 299
                       ..   * . *             *   * ***..**  ***.*.***************


BVH11-2 SP64     286 RTARGVAVPHGNHYHFIPYEQMSELEKRIARIIPLRYRSNHWVPDSRPEQPSPQSTPEPS 345
BVH11-2 JNR7/87  287 RTARGVAVPHGNHYHFIPYEQMSELEKRIARIIPLRYRSNHWVPDSRPEQPSPQSTPEPS 346
BVH11-2 P4241    287 RTARGVAVPHGNHYHFIPYEQMSELEERIARIIPLRYRSNHWVPDSRPEQPSPQ----PS 342
BVH11-2 A66      287 RTARGVAVPHGNHYHFIPYEQMSELEERIARIIPLRYRSNHWVPDSRPEQPSPQ----PS 342
BVH11-2 WU2      287 RTARGVAVPHGNHYHFIPYEQMSELEERIARIIPLRYRSNHWVPDSRPEQPSPQ----PS 342
BVH11-2 Rx1      286 RTANGVAVPHGDHYHFIPYSQLSPLEEKLARIIPLRYRSNHWVPDSRPEQPSPQSTPEPS 345
BVH11 P4241      287 RTARGVAVPHGNHYHFIPYEQMSELEERIARIIPLRYRSNHWVPDSRPEQPSPQ----PS 342
BVH11 WU2        287 RTARGVAVPHGNHYHFIPYEQMSELEERIARIIPLRYRSNHWVPDSRPEQPSPQ----PS 342
BVH11 A66        287 RTARGVAVPHGNHYHFIPYEQMSELEERIARIIPLRYRSNHWVPDSRPEQPSPQ----PS 342
BVH11 Rx1        286 RTANGVAVPHGDHYHFIPYSQLSPLEEKLARIIPLRYRSNHWVPDSRPEQPSPQSTPEPS 345
BVH11 JNR7/87    286 RTARGVAVPHGNHYHFIPYEQMSELEKRIARIIPLRYRSNHWVPDSRPEEPSPQPTPEPS 345
BVH11 SP63       286 RTARGVAVPHGNHYHFIPYSQMSELEERIARIIPLRYRSNHWVPDSRPEQPSPQSTPEPS 345
BVH11  SP64      300 RTARGVAVPHGNHYHFIPYEQMSELEKRIARIIPLRYRSNHWVPDSRPEEPSPQPTPEPS 359
                     *** ******* ******* *.* ** ..*********************.****    **


BVH11-2 SP64     346 PSLQPAPNPQPAPSNPIDEKLVKEAVRKVGDGYVFEENGVSRYIPAKDLSAETAAGIDSK 405
BVH11-2 JNR7/87  347 PSPQPAPNPQPAPSNPIDEKLVKEAVRKVGDGYVFEENGVSRYIPAKDLSAETAAGIDSK 406
BVH11-2 P4241    343 PSPQPAPNPQPAPSNPIDEKLVKEAVRKVGDGYVFEENGVSRYIPAKDLSAETAAGIDSK 402
BVH11-2 A66      343 PSPQPAPNPQPAPSNPIDEKLVKEAVRKVGDGYVFEENGVSRYIPAKDLSAETAAGIDSK 402
BVH11-2 WU2      343 PSPQPAPNPQPAPSNPIDEKLVKEAVRKVGDGYVFEENGVSRYIPAKDLSAETAAGIDSK 402
BVH11-2 Rx1      346 PSPQPAPNPQPAPSNPIDEKLVKEAVRKVGDGYVFEENGVPRYIPAKDLSAETAAGIDSK 405
BVH11 P4241      343 PSPQPAPNPQPAPSNPIDEKLVKEAVRKVGDGYVFEENGVSRYIPAKDLSAETAAGIDSK 402
BVH11 WU2        343 PSPQPAPNPQPAPSNPIDEKLVKEAVRKVGDGYVFEENGVSRYIPAKDLSAETAAGIDSK 402
BVH11 A66        343 PSPQPAPNPQPAPSNPIDEKLVKEAVRKVGDGYVFEENGVSRYIPAKDLSAETAAGIDSK 402
BVH11 Rx1        346 PSPQPAPNPQPAPSNPIDEKLVKEAVRKVGDGYVFEENGVPRYIPAKDLSAETAAGIDSK 405
BVH11 JNR7/87    346 PSP------QPAPSNPIDEKLVKEAVRKVGDGYVFEENGVSRYIPAKDLSAETAAGIDSK 399
BVH11 SP63       346 PSPQSAPNPQPAPSNPIDEKLVKEVVRKVGDGYVFEKNGVSRYIPAKNLSAETAAGIDSK 405
BVH11  SP64      360 PSPQPAPNPQPAPSNPIDEKLVKEAVRKVGDGYVFEENGVSRYIPAKNLSAETAAGIDSK 419
                     **       *************** *********** *** ****** ************


BVH11-2 SP64     406 LAKQESLSHKLGAKKTDLPSSDREFYNKAYDLLARIHQDLLDNKGRQVDFEVLDNLLERL 465
BVH11-2 JNR7/87  407 LAKQESLSHKLGAKKTDLPSSDREFYNKAYDLLARIHQDLLDNKGRQVDFEALDNLLERL 466
BVH11-2 P4241    403 LAKQESLSHKLGTKKTDLPSSDREFYNKAYDLLARIHQDLLDNKGRQVDFEALDNLLERL 462
BVH11-2 A66      403 LAKQESLSHKLGTKKTDLPSSDREFYNKAYDLLARIHQDLLDNKGRQVDFEALDNLLERL 462
BVH11-2 WU2      403 LAKQESLSHKLGTKKTDLPSSDREFYNKAYDLLARIHQDLLDNKGRQVDFEALDNLLERL 462
BVH11-2 Rx1      406 LAKQESLSHKLGAKKTDLPSSDREFYNKAYDLLARIHQDLLDNKGRQVDFEALDNLLERL 465
BVH11 P4241      403 LAKQESLSHKLGTKKTDLPSSDREFYNKAYDLLARIHQDLLDNKGRQVDFEALDNLLERL 462
BVH11 WU2        403 LAKQESLSHKLGTKKTDLPSSDREFYNKAYDLLARIHQDLLDNKGRQVDFEALDNLLERL 462
BVH11 A66        403 LAKQESLSHKLGTKKTDLPSSDREFYNKAYDLLARIHQDLLDNKGRQVDFEALDNLLERL 462
BVH11 Rx1        406 LAKQESLSHKLGAKKTDLPSSDREFYNKAYDLLARIHQDLLDNKGRQVDFEALDNLLERL 465
BVH11 JNR7/87    400 LAKQESLSHKLGAKKTDLPSSDREFYNKAYDLLARIHQDLLDNKGRQVDFEALDNLLERL 459
BVH11 SP63       406 LAKQESLSHKLGAKKTDLPSSDREFYNKAYDLLARIHQDLLDNKGRQVDFEALDNLLERL 465
BVH11  SP64      420 LAKQESLSHKLGAKKTDLPSSDREFYNKAYDLLARIHQDLLDNKGRQVDFEALDNLLERL 479
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BVH11-2 SP64     466 KDVSSDKVKLVDDILAFLAPIRHPERLGKPNAQITYTDDEIQVAKLAGKYTTEDGYIFDP 525
BVH11-2 JNR7/87  467 KDVPSDKVKLVDDILAFLAPIRHPERLGKPNAQITYTDDEIQVAKLAGKYTTEDGYIFDP 526
BVH11-2 P4241    463 KDVSSDKVKLVEDILAFLAPIRHPERLGKPNSQITYTDDEIQVAKLAGKYTTEDGYIFDP 522
BVH11-2 A66      463 KDVSSDKVKLVEDILAFLAPIRHPERLGKPNSQITYTDDEIQVAKLAGKYTTEDGYIFDP 522
BVH11-2 WU2      463 KDVSSDKVKLVEDILAFLAPIRHPERLGKPNSQITYTDDEIQVAKLAGKYTTEDGYIFDP 522
BVH11-2 Rx1      466 KDVSSDKVKLVDDILAFLAPIRHPERLGKPNAQITYTDDEIQVAKLAGKYTTEDGYIFDP 525
BVH11 P4241      463 KDVSSDKVKLVEDILAFLAPIRHPERLGKPNSQITYTDDEIQVAKLAGKYTTEDGYIFDP 522
BVH11 WU2        463 KDVSSDKVKLVEDILAFLAPIRHPERLGKPNSQITYTDDEIQVAKLAGKYTTEDGYIFDP 522
BVH11 A66        463 KDVSSDKVKLVEDILAFLAPIRHPERLGKPNSQITYTDDEIQVAKLAGKYTTEDGYIFDP 522
BVH11 Rx1        466 KDVSSDKVKLVDDILAFLAPIRHPERLGKPNAQITYTDDEIQVAKLAGKYTTEDGYIFDP 525
BVH11 JNR7/87    460 KDVSSDKVKLVDDILAFLAPIRHPERLGKPNAQITYTDDEIQVAKLAGKYTTEDGYIFDP 519
BVH11 SP63       466 EDVPSDKVKLVDDILAFLAPIRHPERLGKPNAQITYTDDEIQVAKLAGKYTTEDGYIFDP 525
BVH11  SP64      480 KDVSSDKVKLVDDILAFLAPIRHPERLGKPNAQITYTDDEIQVAKLAGKYTTEDGYIFDP 539
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BVH11-2 SP64     526 RDITSDEGDAYVTPHMTHSHWIKKDSLSEAERAAAQAYAKEKGLTPPSTDHQDSGNTEAK 585
BVH11-2 JNR7/87  527 RDITSDEGDAYVTPHMTHSHWIKKDSLSEAERAAAQAYAKEKGLTPPSTDHQDSGNTEAK 586
BVH11-2 P4241    523 RDITSDEGDAYVTPHMTHSHWIKKDSLSEAERAAAQAYAKEKGLTPPSTDHRDSGNTEAK 582
BVH11-2 A66      523 RDITSDEGDAYVTPHMTHSHWIKKDSLSEAERAAAQAYAKEKGLTPPSTDHQDSGNTEAK 582
BVH11-2 WU2      523 RDITSDEGDAYVTPHMTHSHWIKKDSLSEAERAAAQAYAKEKGLTPPSTDHQDSGNTEAK 582
BVH11-2 Rx1      526 RDITSDEGDAYVTPHMTHSHWIKKDSLSEAERAAAQAYAKEKGLTPPSTDHQDSGNTEAK 585
BVH11 P4241      523 RDITSDEGDAYVTPHMTHSHWIKKDSLSEAERAAAQAYAKEKGLTPPSTDHQDSGNTEAK 582
BVH11 WU2        523 RDITSDEGDAYVTPHMTHSHWIKKDSLSEAERAAAQAYAKEKGLTPPSTDHQDSGNTEAK 582
BVH11 A66        523 RDITSDEGDAYVTPHMTHSHWIKKDSLSEAERAAAQAYAKEKGLTPPSTDHQDSGNTEAK 582
BVH11 Rx1        526 RDITSDEGDAYVTPHMTHSHWIKKDSLSEAERAAAQAYAKEKGLTPPSTDHQDSGNTEAK 585
BVH11 JNR7/87    520 RDITSDEGDAYVTPHMTHSHWIKKDSLSEAERAAAQAYAKEKGLTPPSTDHQDSGNTEAK 579
BVH11 SP63       526 RDITSDEGDAYVTPHMTHSHWIKKDSLSEAERAAAQAYAKEKGLTPPSTDHQDSGNTEAK 585
BVH11  SP64      540 RDITSDEGDAYVTPHMTHSHWIKKDSLSEAERAAAQAYAKEKGLTPPSTDHQDSGNTEAK 599
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BVH11-2 SP64     586 GAEAIYNRVKAAKKVPLDRMPYNLQYTVEVKNGSLIIPHYDHYHNIKFEWFDEGLYEAPK 645
BVH11-2 JNR7/87  587 GAEAIYNRVKAAKKVPLDRMPYNLQYTVEVKNGSLIIPHYDHYHNIKFEWFDEGLYEAPK 646
BVH11-2 P4241    583 GAEAIYNRVKAAKKVPLDRMPYNLQYTVEVKNGSLIIPHYDHYHNIKFEWFDEGLYEAPK 642
BVH11-2 A66      583 GAEAIYNRVKAAKKVPLDRMPYNLQYTVEVKNGSLIIPHYDHYHNIKFEWFDEGLYEAPK 642
BVH11-2 WU2      583 GAEAIYNRVKAAKKVPLDRMPYNLQYTVEVKNGSLIIPHYDHYHNIKFEWFDEGLYEAPK 642
BVH11-2 Rx1      586 GAEAIYNRVKAAKKVPLDRMPYNLQYTVEVKNGSLIIPHYDHYHNIKFEWFDEGLYEAPK 645
BVH11 P4241      583 GAEAIYNRVKAAKKVPLDRMPYNLQYTVEVKNGSLIIPHYDHYHNIKFEWFDEGLYEAPK 642
BVH11 WU2        583 GAEAIYNRVKAAKKVPLDRMPYNLQYTVEVKNGSLIIPHYDHYHNIKFEWFDEGLYEAPK 642
BVH11 A66        583 GAEAIYNRVKAAKKVPLDRMPYNLQYTVEVKNGSLIIPHYDHYHNIKFEWFDEGLYEAPK 642
BVH11 Rx1        586 GAEAIYNRVKAAKKVPLDRMPYNLQYTVEVKNGSLIIPHYDHYHNIKFEWFDEGLYEAPK 645
BVH11 JNR7/87    580 GAEAIYNRVKAAKKVPLDRMPYNLQYTVEVKNGSLIIPHYDHYHNIKFEWFDEGLYEAPK 639
BVH11 SP63       586 GAEAIYNRVKAAKKVPLDRMPYNLQYTVEVKNGSLIIPHYDHYHNIKFEWFDEGLYEAPK 645
BVH11  SP64      600 GAEAIYNRVKAAKKVPLDRMPYNLQYTVEVKNGSLIIPHYDHYHNIKFEWFDEGLYEAPK 659
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BVH11-2 SP64     646 GYSLEDLLATVKYYVEHPNERPHSDNGFGNASDHVRKNK---------------ADQDSK 690
BVH11-2 JNR7/87  647 GYTLEDLLATVKYYVEHPNERPHSDNGFGNASDHVRKNK---------------VDQDSK 691
BVH11-2 P4241    643 GYTLEDLLATVKYYVEHPNERPHSDNGFGNASDHVRKNK---------------ADQDSK 687
BVH11-2 A66      643 GYTLEDLLATVKYYVEHPNERPHSDNGFGNASDHVRKNK---------------ADQDSK 687
BVH11-2 WU2      643 GYTLEDLLATVKYYVEHPNERPHSDNGFGNASDHVRKNK---------------ADQDSK 687
BVH11-2 Rx1      646 GYSLEDLLATVKYYVEHPNERPHSDNGFGNASDHVQRNKNGQADTNQTEKPNEEKPQTEK 705
BVH11 P4241      643 GYTLEDLLATVKYYVEHPNERPHSDNGFGNASDHVRKNK---------------ADQDSK 687
BVH11 WU2        643 GYTLEDLLATVKYYVEHPNERPHSDNGFGNASDHVRKNK---------------ADQDSK 687
BVH11 A66        643 GYTLEDLLATVKYYVEHPNERPHSDNGFGNASDHVRKNK---------------ADQDSK 687
BVH11 Rx1        646 GYSLEDLLATVKYYVEHPNERPHSDNGFGNASDHVQRNK-------------------NGQ 687
BVH11 JNR7/87    640 GYSLEDLLATVKYYVEHPNERPHSDNGFGNASDHVQRNK-------------------NGQ 681
BVH11 SP63       646 GYTLEDLLATVKYYVEHPNERPHSDNGFGNASDHVQRNK-------------------NGQ 687
BVH11  SP64      660 GYTLEDLLATVKYYVEHPNERPHSDNGFGNASDHVQRNK-------------------NGQ 701
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BVH11-2 SP64     691 PDEDKEHDEVSEPTHPESDEKENHAGLNPSADNLYKPSTDTEETEEEAEDTTDEAEIPQV 750
BVH11-2 JNR7/87  692 PDEDKEHDEVSEPTHPESDEKENHAGLNPSADNLYKPSTDTEETEEEAEDTTDEAEIPQV 751
BVH11-2 P4241    688 PDEDKGHDEVSEPTHPESDEKENHAGLNPSADNLYKPSTDTEETEEEAEDTTDEAEIPQV 747
BVH11-2 A66      688 PDEDKGHDEVSEPTHPESDEKENHAGLNPSADNLYKPSTDTEETEEEAEDTTDEAEIPQV 747
BVH11-2 WU2      688 PDEDKGHDEVSEPTHPESDEKENHAGLNPSADNLYKPSTDTEETEEEAEDTTDEAEIPQV 747
BVH11-2 Rx1      706 PEEDKEHDEVSEPTHPESDEKENHVGLNPSADNLYKPSTDTEETEEEAEDTTDEAEIPQV 765
BVH11 P4241      688 PDEDKGHDEVSEPTHPESDEKENHAGLNPSADNLYKPSTDTEETEEEAEDTTDEAEIPQV 747
BVH11 WU2        688 PDEDKGHDEVSEPTHPESDEKENHAGLNPSADNLYKPSTDTEETEEEAEDTTDEAEIPQV 747
BVH11 A66        688 PDEDKGHDEVSEPTHPESDEKENHAGLNPSADNLYKPSTDTEETEEEAEDTTDEAEIPQV 747
BVH11 Rx1        688 ADTNQTEKPNEEKPQTEKPEEETPREEKPQSEKPESPKPTEEPEEESPEESPEESEEPQV 747
BVH11 JNR7/87    682 ADTNQTEKPNEEKPQTEKPEEETPREEKPQSEKPESPKPTEEPEEESPEESPEESEEPQV 741
BVH11 SP63       688 ADTNQTEKPSEEKPQTEKPEEETPREEKPQSEKPESP----KPTEEPEEESPEESEEPQV 743
BVH11  SP64      702 ADTNQTEKPSEEKPQTEKPEEETPREEKPQSEKPESP----KPTEEPEEESPEESEEPQV 757
                       .  .       *  . *  * *.     * ..    *       **  *.. .*.* ***

BVH11-2 SP64     751 ENSVINAKIADAEALLEKVTDPSIRQNAMETLTGLKSSLLLGTKDNNTISAEVDSLLALL 810
BVH11-2 JNR7/87  752 ENSVINAKIADAEALLEKVTDPSIRQNAMETLTGLKSSLLLGTKDNNTISAEVDSLLALL 811
BVH11-2 P4241    748 EHSVINAKIADAEALLEKVTDPSIRQNAMETLTGLKSSLLLGTKDNNTISAEVDSLLALL 807
BVH11-2 A66      748 EHSVINAKIADAEALLEKVTDPSIRQNAMETLTGLKSSLLLGTKDNNTISAEVDSLLALL 807
BVH11-2 WU2      748 EHSVINAKIADAEALLEKVTDPSIRQNAMETLTGLKSSLLLGTKDNNTISAEVDSLLALL 807
BVH11-2 Rx1      766 EYSVINAKIAEAEALLEKVTDSSIRQNAVETLTGLKSSLLLGTKDNNTISAEVDSLLALL 825
BVH11 P4241      748 EHSVINAKIADAEALLEKVTDPSIRQNAMETLTGLKSSLLLGTKDNNTISAEVDSLLALL 807
BVH11 WU2        748 EHSVINAKIADAEALLEKVTDPSIRQNAMETLTGLKSSLLLGTKDNNTISAEVDSLLALL 807
BVH11 A66        748 EHSVINAKIADAEALLEKVTDPSIRQNAMETLTGLKSSLLLGTKDNNTISAEVDSLLALL 807
BVH11 Rx1        748 ETEKVKEKLREAEDLLGKIQNPIIKSNAKETLTGLKNNLLFGTQDNNTIMAEAEKLLALL 807
BVH11 JNR7/87    742 ETEKVKEKLREAEDLLGKIQNPIIKSNAKETLTGLKNNLLFGTQDNNTIMAEAEKLLALL 801
BVH11 SP63       744 ETEKVEEKLREAEDLLGKIQDPIIKSNAKETLTGLKNNLLFGTQDNNTIMAEAEKLLALL 803
BVH11  SP64      758 ETEKVEEKLREAEDLLGKIQDPIIKSNAKETLTGLKNNLLFGTQDNNTIMAEAEKLLALL 817
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BVH11-2 SP64     811 KESQPAPIQ 819
BVH11-2 JNR7/87  812 KESQPAPIQ 820
BVH11-2 P4241    808 KKSQPAPIQ 816
BVH11-2 A66      808 KKSQPAPIQ 816
BVH11-2 WU2      808 KKSQPAPIQ 816
BVH11-2 Rx1      826 KESQPAPIQ 834
BVH11 P4241      808 KESK      811
BVH11 WU2        808 KESK      811
BVH11 A66        808 KESK      811
BVH11 Rx1        808 KESK      811
BVH11 JNR7/87    802 KESK      805
BVH11 SP63       804 KESK      807
BVH11  SP64      818 KESK      821
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FIGURE 12

BVH11-2 SP64	BVH11 SP63	BVH11 JNR.7/87	BVH11-2 JNR.7/87	BVH11 WU2	BVH11-2 WU2	BVH11 A66	BVH11-2 A66	BVH11 P4241	BVH11-2 P4241	BVH11 Rx-1	BVH11-2 Rx-1	
I 81% S 86%	I 88% S 90%	I 88% S 91%	I 82% S 87%	I 80% S 85%	I 80% S 85%	I 80% S 85%	I 80% S 85%	I 80% S 85%	I 80% S 85%	I 88% S 91%	I 81% S 85%	BVH11 SP64
	I 87% S 90%	I 87% S 90%	I 98% S 98%	I 95% S 96%	I 96% S 97%	I 95% S 96%	I 96% S 97%	I 95% S 96%	I 96% S 97%	I 87% S 90%	I 94% S 95%	BVH11-2 SP64
		I 96% S 96%	I 88% S 91%	I 88% S 91%	I 87% S 90%	I 88% S 91%	I 87% S 90%	I 88% S 91%	I 87% S 90%	I 97% S 97%	I 89% S 91%	BVH11 SP63
			I 87% S 90%	I 87% S 91%	I 86% S 90%	I 87% S 91%	I 86% S 90%	I 87% S 91%	I 86% S 90%	I 96% S 96%	I 88% S 90%	BVH11 JNR.7/87
				I 96% S 97%	I 97% S 98%	I 96% S 97%	I 97% S 98%	I 96% S 97%	I 97% S 98%	I 87% S 90%	I 94% S 95%	BVH11-2 JNR.7/87
					I 98% S 98%	I 92% S 94%	I 98% S 98%	I 99% S 99%	I 98% S 98%	I 87% S 91%	I 92% S 94%	BVH11 WU2
						I 98% S 98%	I 99% S 99%	I 98% S 98%	I 99% S 99%	I 86% S 90%	I 93% S 95%	BVH11-2 WU2
							I 99% S 99%	I 100%	I 99% S 99%	I 87% S 91%	I 92% S 94%	BVH11 A66
								I 99% S 99%	I 99% S 99%	I 86% S 90%	I 93% S 95%	BVH11-2 A66
									I 99% S 99%	I 87% S 91%	I 92% S 94%	BVH11 P4241
										I 86% S 90%	I 93% S 95%	BVH11-2 P4241
											I 91% S 92%	BVH11 Rx-1

FIGURE 13

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AATTCCTTGT CGGGTAAGTT CCGACCCGCA CGAAAGGCGT AATGATTTGG GCACTGTCTC        60
AACGAGAGAC TCGGTGAAAT TTTAGTACCT GTGAAGATGC AGGTTACCCG CGACAGGACG       120
GAAAGACCCC ATGGAGCTTT ACTGCAGTTT GATATTGAGT GTCTGTACCA CATGTACAGG       180
ATAGGTAGGA GTCTAAGAGA TCGGGACGCC AGTTTCGAAG GAGACGCTGT TGGGATACTA       240
CCCTTGTGTT ATGGCCACTC TAACCCAGAT AGGTGATCCC TATCGGAGAC AGTGTCTGAC       300
GGGCAGTTTG ACTGGGGCGG TCGCCTCCTA AAAGGTAACG GAGGCGCCCA AAGGTTCCCT       360
CAGAATGGTT GGAAATCATT CGCAGAGTGT AAAGGTATAA GGGAGCTTGA CTGCGAGAGC       420
TACAACTCGA GCAGGGACGA AAGTCGGGCT TAGTGATCCG GTGGTTCCGT ATGGAAGGGC       480
CATCGCTCAA CGGATAAAAG CTACCCTGGG GATAACAGGC TTATCTCCCC CAAGAGTTCA       540
CATCGACGGG GAGGTTTGGC ACCTCGATGT CGGCTCGTCG CATCCTGGGG CTGTAGTCGG       600
TCCCAAGGGT TGGGCTGTTC GCCCATTAAA GCGGCACGCG AGCTGGGTTC AGAACGTCGT       660
GAGACAGTTC GGTCCCTATC CGTCGCGGGC GTAGGAAATT TGAGAGGATC TGCTCCTAGT       720
ACGAGAGGAC CAGAGTGGAC TTACCGCTGG TGTACCAGTT GTCTTGCCAA AGGCATCGCT       780
GGGTAGCTAT GTAGGGAAGG GATAAACGCT GAAAGCATCT AAGTGTGAAA CCCACCTCAA       840
GATGAGATTT CCCATGATTA TATATCAGTA AGAGCCCTGA GAGATGATCA GGTAGATAGG       900
TTAGAAGTGG AAGTGTGGCG ACACATGTAG CGGACTAATA CTAATAGCTC GAGGACTTAT       960
CCAAAGTAAC TGAGAATATG AAAGCGAACG GTTTTCTTAA ATTGAATAGA TATTCAATTT      1020
TGAGTAGGTA TTACTCAGAG TTAAGTGACG ATAGCCTAGG AGATACACCT GTACCCATGC      1080
CGAACACAGA AGTTAAGCCC TAGAACGCCG GAAGTAGTTG GGGGTTGCCC CCTGTGAGAT      1140
AGGGAAGTCG CTTAGCTCTA GGGAGTTTAG CTCAGCTGGG AGAGCATCTG CCTTACAAGC      1200
AGAGGGTCAG CGGTTCGATC CCGTTAACTC CCAAAGGTCC CGTAGTGTAG CGGTTATCAC      1260
GTCGCCCTGT CACGGCGAAG ATCGCGGGTT CGATTCCCGT CGGGACCGTT TAAGGTAACG      1320
CAAGTTATTT TAGACTCGTT AGCTCAGTTG GTAGAGCAAT TGACTTTTAA TCAATGGGTC      1380
ACTGGTTCGA GCCCAGTACG GGTCATATAT GCGGGTTTGG CGGAATTCTA ATCTCTTTGA      1440
AATCATCTTC TCTCACTTTC CAAAACTCTA TTACCTCTTA TTATACCACA TTTCAATCTT      1500
CAACTTCCCA GTAATATAAG CACCTCTGGC GAAAGAAGTT TCAATGTCCT AAAGTAATAA      1560
GTGAATCCAA TTCAGGAACT CCAAGAACAA AAGAAACATC TGGTGTCACA AGTATTGGAT      1620
GGCACAGAGT CACGTGGTAG TCTGACCCTA GCAGAAATTT TAAATAGTAA ACTATTTACT      1680
GGTTAATTAA ATGGTTAAAT AACCGGTTTA GAAAACTATT TAATAAAGTA AAAGAAGTTG      1740
AGAAAAAACT TCATCATTTA TTGAAATGAG GGATTTATGA AATTTAGTAA AAAATATATA      1800
GCAGCTGGAT CAGCTGTTAT CGTATCCTTG AGTCTATGTG CCTATGCACT AAACCAGCAT      1860
CGTTCGCAGG AAAATAAGGA CAATAATCGT GTCTCTTATG TGGATGGCAG CCAGTCAAGT      1920
CAGAAAAGTG AAAACTTGAC ACCAGACCAG GTTAGCCAGA AAGAAGGAAT TCAGGCTGAG      1980
CAAATTGTAA TCAAAATTAC AGATCAGGGC TATGTAACGT CACACGGTGA CCACTATCAT      2040
TACTATAATG GGAAAGTTCC TTATGATGCC CTCTTTAGTG AAGAACTCTT GATGAAGGAT      2100
CCAAACTATC AACTTAAAGA CGCTGATATT GTCAATGAAG TCAAGGGTGG TTATATCATC      2160
AAGGTCGATG GAAAATATTA TGTCTACCTG AAAGATGCAG CTCATGCTGA TAATGTTCGA      2220
ACTAAAGATG AAATCAATCG TCAAAAACAA GAACATGTCA AAGATAATGA GAAGGTTAAC      2280
TCTAATGTTG CTGTAGCAAG GTCTCAGGGA CGATATACGA CAAATGATGG TTATGTCTTT      2340
AATCCAGCTG ATATTATCGA AGATACGGGT AATGCTTATA TCGTTCCTCA TGGAGGTCAC      2400
TATCACTACA TTCCCAAAAG CGATTTATCT GCTAGTGAAT TAGCAGCAGC TAAAGCACAT      2460
CTGGCTGGAA AAAATATGCA ACCGAGTCAG TTAAGCTATT CTTCAACAGC TAGTGACAAT      2520
AACACGCAAT CTGTAGCAAA AGGATCAACT AGCAAGCCAG CAAATAAATC TGAAAATCTC      2580
CAGAGTCTTT TGAAGGAACT CTATGATTCA CCTAGCGCCC AACGTTACAG TGAATCAGAT      2640
GGCCTGGTCT TTGACCCTGC TAAGATTATC AGTCGTACAC CAAATGGAGT TGCGATTCCG      2700
CATGGCGACC ATTACCACTT TATTCCTTAC AGCAAGCTTT CTGCTTTAGA AGAAAAGATT      2760
GCCAGAATGG TGCCTATCAG TGGAACTGGT TCTACAGTTT CTACAAATGC AAAACCTAAT      2820
GAAGTAGTGT CTAGTCTAGG CAGTCTTTCA AGCAATCCTT CTTCTTTAAC GACAAGTAAG      2880
GAGCTCTCTT CAGCATCTGA TGGTTATATT TTTAATCCAA AAGATATCGT TGAAGAAACG      2940
GCTACAGCTT ATATTGTAAG ACATGGTGAT CATTTCCATT ACATTCCAAA ATCAAATCAA      3000
ATTGGGCAAC CGACTCTTCC AAACAATAGT CTAGCAACAC CTTCTCCATC TCTTCCAATC      3060
AATCCAGGAA CTTCACATGA GAAACATGAA GAAGATGGAT ACGGATTTGA TGCTAATCGT      3120
ATTATCGCTG AAGATGAATC AGGTTTTGTC ATGAGTCACG GAGACCACAA TCATTATTTC      3180
TTCAAGAAGG ACTTGACAGA AGAGCAAATT AAGGCTGCGC AAAAACATTT AGAGGAAGTT      3240
AAAACTAGTC ATAATGGATT AGATTCTTTG TCATCTCATG AACAGGATTA TCCAGGTAAT      3300
GCCAAAGAAA TGAAAGATTT AGATAAAAAA ATCGAAGAAA AAATTGCTGG CATTATGAAA      3360
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CAATATGGTG TCAAACGTGA AAGTATTGTC GTGAATAAAG AAAAAAATGC GATTATTTAT     3420
CCGCATGGAG ATCACCATCA TGCAGATCCG ATTGATGAAC ATAAACCGGT TGGAATTGGT     3480
CATTCTCACA GTAACTATGA ACTGTTTAAA CCCGAAGAAG GAGTTGCTAA AAAAGAAGGG     3540
AATAAAGTTT ATACTGGAGA AGAATTAACG AATGTTGTTA ATTTGTTAAA AAATAGTACG     3600
TTTAATAATC AAAACTTTAC TCTAGCCAAT GGTCAAAAAC GCGTTTCTTT TAGTTTTCCG     3660
CCTGAATTGG AGAAAAAATT AGGTATCAAT ATGCTAGTAA AATTAATAAC ACCAGATGGA     3720
AAAGTATTGG AGAAAGTATC TGGTAAAGTA TTTGGAGAAG GAGTAGGGAA TATTGCAAAC     3780
TTTGAATTAG ATCAACCTTA TTTACCAGGA CAAACATTTA AGTATACTAT CGCTTCAAAA     3840
GATTATCCAG AAGTAAGTTA TGATGGTACA TTTACAGTTC CAACCTCTTT AGCTTACAAA     3900
ATGGCCAGTC AAACGATTTT CTATCCTTTC CATGCAGGGG ATACTTATTT AAGAGTGAAC     3960
CCTCAATTTG CAGTGCCTAA AGGAACTGAT GCTTTAGTCA GAGTGTTTGA TGAATTTCAT     4020
GGAAATGCTT ATTTAGAAAA TAACTATAAA GTTGGTGAAA TCAAATTACC GATTCCGAAA     4080
TTAAACCAAG GAACAACCAG AACGGCCGGA AATAAAATTC CTGTAACCTT CATGGCAAAT     4140
GCTTATTTGG ACAATCAATC GACTTATATT GTGGAAGTAC CTATCTTGGA AAAAGAAAAT     4200
CAAACTGATA AACCAAGTAT TCTACCACAA TTTAAAAGGA ATAAAGCACA AGAAAACTCA     4260
AAACTTGATG AAAAGGTAGA AGAACCAAAG ACTAGTGAGA AGGTAGAAAA AGAAAAACTT     4320
TCTGAAACTG GGAATAGTAC TAGTAATTCA ACGTTAGAAG AAGTTCCTAC AGTGGATCCT     4380
GTACAAGAAA AAGTAGCAAA ATTTGCTGAA AGTTATGGGA TGAAGCTAGA AAATGTCTTG     4440
TTTAATATGG ACGGAACAAT TGAATTATAT TTACCATCAG GAGAAGTCAT TAAAAAGAAT     4500
ATGGCAGATT TTACAGGAGA AGCACCTCAA GGAAATGGTG AAAATAAACC ATCTGAAAAT     4560
GGAAAAGTAT CTACTGGAAC AGTTGAGAAC CAACCAACAG AAAATAAACC AGCAGATTCT     4620
TTACCAGAGG CACCAAACGA AAAACCTGTA AAACCAGAAA ACTCAACGGA TAATGGAATG     4680
TTGAATCCAG AAGGGAATGT GGGGAGTGAC CCTATGTTAG ATCCAGCATT AGAGGAAGCT     4740
CCAGCAGTAG ATCCTGTACA AGAAAAATTA GAAAAATTTA CAGCTAGTTA CGGATTAGGC     4800
TTAGATAGTG TTATATTCAA TATGGATGGA ACGATTGAAT TAAGATTGCC AAGTGGAGAA     4860
GTGATAAAAA AGAATTTATC TGATTTCATA GCGTAAGGAA TAGCAGTAGA AAAAGTCTGA     4920
ATCAAAAATG AAGTTCTCTC AAAAGTTAGA AATAAAACTC TGACTTTGGG AGAATTTCAT     4980
TTTATTATTA ATATATAAAA TTTCTTGACA TACAACTTAA AAAGAGGTGG AATATTTACT     5040
AGTTAATT   (SEQ ID NO : 11)                                           5048
```

FIGURE 14

CAGAGATCTT AGTGAATCAA ATATACTTAA GAAAAGAGGA AAGAATGAAA ATCAATAAAA 60
AATATCTAGC TGGGTCAGTA GCTACACTTG TTTTAAGTGT CTGTGCTTAT GAACTAGGTT 120
TGCATCAAGC TCAAACTGTA AAAGAAAATA ATCGTGTTTC CTATATAGAT GGAAAACAAG 180
CGACGCAAAA AACGGAGAAT TTGACTCCTG ATGAGGTTAG CAAGCGTGAA GGAATCAACG 240
CCGAACAAAT CGTCATCAAG ATTACGGATC AAGGTTATGT GACCTCTCAT GGAGACCATT 300
ATCATTACTA TAATGGCAAG GTCCCTTATG ATGCCATCAT CAGTGAAGAG CTCCTCATGA 360
AAGATCCGAA TTATCAGTTG AAGGATTCAG ACATTGTCAA TGAAATCAAG GGTGGTTATG 420
TCATTAAGGT AAACGGTAAA TACTATGTTT ACCTTAAGGA TGCAGCTCAT GCGGATAATG 480
TCCGTACAAA AGAAGAAATC AATCGGCAAA AACAAGAACA TAGTCAGCAT CGTGAAGGAG 540
GGACTTCAGC AAACGATGGT GCGGTAGCCT TTGCACGTTC ACAGGGACGC TACACCACAG 600
ATGATGGTTA TATCTTCAAT GCATCTGATA TCATCGAAGA TACGGGCGAT GCCTATATCG 660
TTCCTCATGG AGATCATTAC CATTACATTC CTAAGAATGA GTTATCAGCT AGCGAGTTGG 720
CTGCTGCAGA AGCCTTCCTA TCTGGTCGGG AAAATCTGTC AAATTTAAGA ACCTATCGCC 780
GACAAAATAG CGATAACACT CCAAGAACAA ACTGGGTACC TTCTGTAAGC AATCCAGGAA 840
CTACAAATAC TAACACAAGC AACAACAGCA ACACTAACAG TCAAGCAAGT CAAAGTAATG 900
ACATTGATAG TCTCTTGAAA CAGCTCTACA AACTGCCTTT GAGTCAACGC CATGTAGAAT 960
CTGATGGCCT TATTTTCGAC CCAGCGCAAA TCACAAGTCG AACCGCCAGA GGTGTAGCTG 1020
TCCCTCATGG TAACCATTAC CACTTTATCC CTTATGAACA AATGTCTGAA TTGGAAAAAC 1080
GAATTGCTCG TATTATTCCC CTTCGTTATC GTTCAAACCA TTGGGTACCA GATTCAAGAC 1140
CAGAAGAACC AAGTCCACAA CCGACTCCAG AACCTAGTCC AAGTCCGCAA CCTGCACCAA 1200
ATCCTCAACC AGCTCCAAGC AATCCAATTG ATGAGAAATT GGTCAAAGAA GCTGTTCGAA 1260
AAGTAGGCGA TGGTTATGTC TTTGAGGAGA ATGGAGTTTC TCGTTATATC CCAGCCAAGA 1320
ATCTTTCAGC AGAAACAGCA GCAGGCATTG ATAGCAAACT GGCCAAGCAG GAAAGTTTAT 1380
CTCATAAGCT AGGAGCTAAG AAAACTGACC TCCCATCTAG TGATCGAGAA TTTTACAATA 1440
AGGCTTATGA CTTACTAGCA AGAATTCACC AAGATTTACT TGATAATAAA GGTCGACAAG 1500
TTGATTTTGA GGCTTTGGAT AACCTGTTGG AACGACTCAA GGATGTCTCA AGTGATAAAG 1560
TCAAGTTAGT GGATGATATT CTTGCCTTCT TAGCTCCGAT TCGTCATCCA GAACGTTTAG 1620
GAAAACCAAA TGCGCAAATT ACCTACACTG ATGATGAGAT TCAAGTAGCC AAGTTGGCAG 1680
GCAAGTACAC AACAGAAGAC GGTTATATCT TTGATCCTCG TGATATAACC AGTGATGAGG 1740
GGGATGCCTA TGTAACTCCA CATATGACCC ATAGCCACTG GATTAAAAAA GATAGTTTGT 1800
CTGAAGCTGA GAGAGCGGCA GCCCAGGCTT ATGCTAAAGA GAAAGGTTTG ACCCCTCCTT 1860
CGACAGACCA TCAGGATTCA GGAAATACTG AGGCAAAAGG AGCAGAAGCT ATCTACAACC 1920
GCGTGAAAGC AGCTAAGAAG GTGCCACTTG ATCGTATGCC TTACAATCTT CAATATACTG 1980
TAGAAGTCAA AAACGGTAGT TTAATCATAC CTCATTATGA CCATTACCAT AACATCAAAT 2040
TTGAGTGGTT TGACGAAGGC CTTTATGAGG CACCTAAGGG GTATACTCTT GAGGATCTTT 2100
TGGCGACTGT CAAGTACTAT GTCGAACATC CAAACGAACG TCCGCATTCA GATAATGGTT 2160
TTGGTAACGC TAGCGACCAT GTTCAAAGAA ACAAAAATGG TCAAGCTGAT ACCAATCAAA 2220
CGGAAAAACC AAGCGAGGAG AAACCTCAGA CAGAAAAACC TGAGGAAGAA ACCCCTCGAG 2280
AAGAGAAACC ACAAAGCGAG AAACCAGAGT CTCCAAAACC AACAGAGGAA CCAGAAGAAG 2340
AATCACCAGA GGAATCAGAA GAACCTCAGG TCGAGACTGA AAAGGTTGAA GAAAAACTGA 2400
GAGAGGCTGA AGATTTACTT GGAAAAATCC AGGATCCAAT TATCAAGTCC AATGCCAAAG 2460
AGACTCTCAC AGGATTAAAA AATAATTTAC TATTTGGCAC CCAGGACAAC AATACTATTA 2520
TGGCAGAAGC TGAAAAACTA TTGGCTTTAT TAAAGGAGAG TAAGTAAAGG TAGCAGCATT 2580
TTCTAACTCC TAAAAACAGG ATAGGAGAAC GGGAAAACGA AAAATGAGAG CAGAATGTGA 2640
GTTCTAG (SED ID NO : 12) 2647

FIGURE 15

GGGTCTTAAA ACTCTGAATC CTTTAGAGGC AGACCCACAA AATGACAAGA CCTATTTAGA 60
AAATCTGGAA GAAAATATGA GTGTTCTAGC AGAAGAATTA AAGTGAGGAA AGAATGAAAA 120
TCAATAAAAA ATATCTAGCA GGTTCAGTGG CAGTCCTTGC CCTAAGTGTT TGTTCCTATG 180
AACTTGGTCG TCACCAAGCT GGTCAGGTTA AGAAAGAGTC TAATCGAGTT TCTTATATAG 240
ATGGTGATCA GGCTGGTCAA AAGGCAGAAA ATTTGACACC AGATGAAGTC AGTAAGAGAG 300
AGGGGATCAA CGCCGAACAA ATTGTTATCA AGATTACGGA TCAAGGTTAT GTGACCTCTC 360
ATGGAGACCA TTATCATTAC TATAATGGCA AGGTTCCTTA TGATGCCATC ATCAGTGAAG 420
AACTTCTCAT GAAAGATCCG AATTATCAGT TGAAGGATTC AGACATTGTC AATGAAATCA 480
AGGGTGGCTA TGTGATTAAG GTAGACGGAA AATACTATGT TTACCTTAAA GATGCGGCCC 540
ATGCGGACAA TATTCGGACA AAAGAAGAGA TTAAACGTCA GAAGCAGGAA CACAGTCATA 600
ATCATAACTC AAGAGCAGAT AATGCTGTTG CTGCAGCCAG AGCCCAAGGA CGTTATACAA 660
CGGATGATGG GTATATCTTC AATGCATCTG ATATCATTGA GGACACGGGT GATGCTTATA 720
TCGTTCCTCA CGGCGACCAT TACCATTACA TTCCTAAGAA TGAGTTATCA GCTAGCGAGT 780
TAGCTGCTGC AGAAGCCTAT TGGAATGGGA AGCAGGGATC TCGTCCTTCT TCAAGTTCTA 840
GTTATAATGC AAATCCAGTT CAACCAAGAT TGTCAGAGAA CCACAATCTG ACTGTCACTC 900
CAACTTATCA TCAAAATCAA GGGGAAAACA TTTCAAGCCT TTTACGTGAA TTGTATGCTA 960
AACCCTTATC AGAACGCCAT GTAGAATCTG ATGGCCTTAT TTTCGACCCA GCGCAAATCA 1020
CAAGTCGAAC CGCCAGAGGT GTAGCTGTCC CTCATGGTAA CCATTACCAC TTTATCCCTT 1080
ATGAACAAAT GTCTGAATTG GAAAAACGAA TTGCTCGTAT TATTCCCCTT CGTTATCGTT 1140
CAAACCATTG GGTACCAGAT TCAAGACCAG AACAACCAAG TCCACAATCG ACTCCGGAAC 1200
CTAGTCCAAG TCTGCAACCT GCACCAAATC CTCAACCAGC TCCAAGCAAT CCAATTGATG 1260
AGAAATTGGT CAAAGAAGCT GTTCGAAAAG TAGGCGATGG TTATGTCTTT GAGGAGAATG 1320
GAGTTTCTCG TTATATCCCA GCCAAGGATC TTTCAGCAGA AACAGCAGCA GGCATTGATA 1380
GCAAACTGGC CAAGCAGGAA AGTTTATCTC ATAAGCTAGG AGCTAAGAAA ACTGACCTCC 1440
CATCTAGTGA TCGAGAATTT TACAATAAGG CTTATGACTT ACTAGCAAGA ATTCACCAAG 1500
ATTTACTTGA TAATAAAGGT CGACAAGTTG ATTTTGAGGT TTTGGATAAC CTGTTGGAAC 1560
GACTCAAGGA TGTCTCAAGT GATAAAGTCA AGTTAGTGGA TGATATTCTT GCCTTCTTAG 1620
CTCCGATTCG TCATCCAGAA CGTTTAGGAA AACCAAATGC GCAAATTACC TACACTGATG 1680
ATGAGATTCA AGTAGCCAAG TTGGCAGGCA AGTACACAAC AGAAGACGGT TATATCTTTG 1740
ATCCTCGTGA TATAACCAGT GATGAGGGGG ATGCCTATGT AACTCCACAT ATGACCCATA 1800
GCCACTGGAT TAAAAAAGAT AGTTTGTCTG AAGCTGAGAG AGCGGCAGCC CAGGCTTATG 1860
CTAAAGAGAA AGGTTTGACC CCTCCTTCGA CAGACCACCA GGATTCAGGA AATACTGAGG 1920
CAAAAGGAGC AGAAGCTATC TACAACCGCG TGAAAGCAGC TAAGAAGGTG CCACTTGATC 1980
GTATGCCTTA CAATCTTCAA TATACTGTAG AAGTCAAAAA CGGTAGTTTA ATCATACCTC 2040
ATTATGACCA TTACCATAAC ATCAAATTTG AGTGGTTTGA CGAAGGCCTT TATGAGGCAC 2100
CTAAGGGGTA TAGTCTTGAG GATCTTTTGG CGACTGTCAA GTACTATGTC GAACATCCAA 2160
ACGAACGTCC GCATTCAGAT AATGGTTTTG GTAACGCTAG TGACCATGTT CGTAAAAATA 2220
AGGCAGACCA AGATAGTAAA CCTGATGAAG ATAAGGAACA TGATGAAGTA AGTGAGCCAA 2280
CTCACCCTGA ATCTGATGAA AAAGAGAATC ACGCTGGTTT AAATCCTTCA GCAGATAATC 2340
TTTATAAACC AAGCACTGAT ACGGAAGAGA CAGAGGAAGA AGCTGAAGAT ACCACAGATG 2400
AGGCTGAAAT TCCTCAAGTA GAGAATTCTG TTATTAACGC TAAGATAGCA GATGCGGAGG 2460
CCTTGCTAGA AAAAGTAACA GATCCTAGTA TTAGACAAAA TGCTATGGAG ACATTGACTG 2520
GTCTAAAAAG TAGTCTTCTT CTCGGAACGA AAGATAATAA CACTATTTCA GCAGAAGTAG 2580
ATAGTCTCTT GGCTTTGTTA AAAGAAAGTC AACCGGCTCC TATACAGTAG TAAAATGAA 2639
(SEQ ID NO : 13)

FIGURE 16

```
MKINKKYLAG SVAVLALSVC SYELGRHQAG QVKKESNRVS YIDGDQAGQK        50
AENLTPDEVS KREGINAEQI VIKITDQGYV TSHGDHYHYY NGKVPYDAII       100
SEELLMKDPN YQLKDSDIVN EIKGGYVIKV DGKYYVYLKD AAHADNIRTK       150
EEIKRQKQEH SHNHNSRADN AVAAARAQGR YTTDDGYIFN ASDIIEDTGD       200
AYIVPHGDHY HYIPKNELSA SELAAAEAYW NGKQGSRPSS SSSYNANPVQ       250
PRLSENHNLT VTPTYHQNQG ENISSLLREL YAKPLSERHV ESDGLIFDPA       300
QITSRTARGV AVPHGNHYHF IPYEQMSELE KRIARIIPLR YRSNHWVPDS       350
RPEQPSPQST PEPSPSLQPA PNPQPAPSNP IDEKLVKEAV RKVGDGYVFE       400
ENGVSRYIPA KDLSAETAAG IDSKLAKQES LSHKLGAKKT DLPSSDREFY       450
NKAYDLLARI HQDLLDNKGR QVDFEVLDNL LERLKDVSSD KVKLVDDILA       500
FLAPIRHPER LGKPNAQITY TDDEIQVAKL AGKYTTEDGY IFDPRDITSD       550
EGDAYVTPHM THSHWIKKDS LSEAERAAAQ AYAKEKGLTP PSTDHQDSGN       600
TEAKGAEAIY NRVKAAKKVP LDRMPYNLQY TVEVKNGSLI IPHYDHYHNI       650
KFEWFDEGLY EAPKGYSLED LLATVKYYVE HPNERPHSDN GFGNASDHVR       700
KNKADQDSKP DEDKEHDEVS EPTHPESDEK ENHAGLNPSA DNLYKPSTDT       750
EETEEEAEDT TDEAEIPQVE NSVINAKIAD AEALLEKVTD PSIRQNAMET       800
LTGLKSSLLL GTKDNNTISA EVDSLLALLK ESQPAPIQ                    838
```
(SEQ ID NO : 14)

FIGURE 17

```
TGTGCCTATG CACTAAACCA GCATCGTTCG CAGGAAAATA AGGACAATAA TCGTGTCTCT        60
TATGTGGATG GCAGCCAGTC AAGTCAGAAA AGTGAAAACT TGACACCAGA CCAGGTTAGC       120
CAGAAAGAAG GAATTCAGGC TGAGCAAATT GTAATCAAAA TTACAGATCA GGGCTATGTA       180
ACGTCACACG GTGATCACTA TCATTACTAT AATGGGAAAG TTCCTTATGA TGCCCTCTTT       240
AGTGAAGAAC TCTTGATGAA GGATCCAAAC TATCAACTTA AAGACGCTGA TATTGTCAAT       300
GAAGTCAAGG GTGGTTATAT CATCAAGGTC GATGGAAAAT ATTATGTCTA CCTGAAAGAT       360
GCAGCTCATG CTGATAATGT TCGAACTAAA GATGAAATCA ATCGTCAAAA ACAAGAACAT       420
GTCAAAGATA ATGAGAAGGT TAACTCTAAT GTTGCTGTAG CAAGGTCTCA GGGACGATAT       480
ACGACAAATG ATGGTTATGT CTTTAATCCA GCTGATATTA TCGAAGATAC GGGTAATGCT       540
TATATCGTTC CTCATGGAGG TCACTATCAC TACATTCCCA AAAGCGATTT ATCTGCTAGT       600
GAATTAGCAG CAGCTAAAGC ACATCTGGCT GGAAAAAATA TGCAACCGAG TCAGTTAAGC       660
TATTCTTCAA CACCTTCTCC ATCTCTTCCA ATCAATCCAG GAACTTCACA TGAGAAACAT       720
GAAGAAGATG GATACGGATT TGATGCTAAT CGTATTATCG CTGAAGATGA ATCAGGTTTT       780
GTCATGAGTC ACGGAGACCA CAATCATTAT TTCTTCAAGA AGGACTTGAC AGAAGAGCAA       840
ATTAAGGCTG CGCAAAAACA TTTAGAGGAA GTTAAAACTA GTCATAATGG ATTAGATTCT       900
TTGTCATCTC ATGAACAGGA TTATCCAAGT AATGCCAAAG AAATGAAAGA TTTAGATAAA       960
AAAATCGAAG AAAAAATTGC TGGCATTATG AAACAATATG GTGTCAAACG TGAAAGTATT      1020
GTCGTGAATA AAGAAAAAAA TGCGATTATT TATCCGCATG GAGATCACCA TCATGCAGAT      1080
CCGATTGATG AACATAAACC GGTTGGAATT GGTCATTCTC ACAGTAACTA TGAACTGTTT      1140
AAACCCGAAG AAGGAGTTGC TAAAAAAGAA GGGAATAAAG TTTATACTGG AGAAGAATTA      1200
ACGAATGTTG TTAATTTGTT AAAAAATAGT ACGTTTAATA ATCAAAACTT TACTCTAGCC      1260
AATGGTCAAA AACGCGTTTC TTTTAGTTTT CCGCCTGAAT TGGAGAAAAA ATTAGGTATC      1320
AATATGCTAG TAAAATTAAT AACACCAGAT GGAAAAGTAT TGGAGAAAGT ATCTGGTAAA      1380
GTATTTGGAG AAGGAGTAGG GAATATTGCA AACTTTGAAT TAGATCAACC TTATTTACCA      1440
GGACAAACAT TTAAGTATAC TATCGCTTCA AAAGATTATC CAGAAGTAAG TTATGATGGT      1500
ACATTTACAG TTCCAACCTC TTTAGCTTAC AAAATGGCCA GTCAAACGAT TTTCTATCCT      1560
TTCCATGCAG GGGATACTTA TTTAAGAGTG AACCCTCAAT TTGCAGTGCC TAAAGGAACT      1620
GATGCTTTAG TCAGAGTGTT TGATGAATTT CATGGAAATG CTTATTTAGA AAATAACTAT      1680
AAAGTTGGTG AAATCAAATT ACCGATTCCG AAATTAAACC AAGGAACAAC CAGAACGGCC      1740
GGAAATAAAA TTCCTGTAAC CTTCATGGCA AATGCTTATT TGGACAATCA ATCGACTTAT      1800
ATTGTGGAAG TACCTATCTT GGAAAAAGAA AATCAAACTG ATAAACCAAG TATTCTACCA      1860
CAATTTAAAA GGAATAAAGC ACAAGAAAAC TCAAAACTTG ATGAAAAGGT AGAAGAACCA      1920
AAGACTAGTG AGAAGGTAGA AAAAGAAAAA CTTTCTGAAA CTGGGAATAG TACTAGTAAT      1980
TCAACGTTAG AAGAAGTTCC TACAGTGGAT CCTGTACAAG AAAAAGTAGC AAAATTTGCT      2040
GAAAGTTATG GGATGAAGCT AGAAAATGTC TTGTTTAATA TGGACGGAAC AATTGAATTA      2100
TATTTACCAT CGGGAGAAGT CATTAAAAAG AATATGGCAG ATTTTACAGG AGAAGCACCT      2160
CAAGGAAATG GTGAAAATAA ACCATCTGAA AATGGAAAAG TATCTACTGG AACAGTTGAG      2220
AACCAACCAA CAGAAAATAA ACCAGCAGAT TCTTTACCAG AGGCACCAAA CGAAAAACCT      2280
GTAAAACCAG AAAACTCAAC GGATAATGGA ATGTTGAATC CAGAAGGGAA TGTGGGGAGT      2340
GACCCTATGT TAGATTCAGC ATTAGAGGAA GCTCCAGCAG TAGATCCTGT ACAAGAAAAA      2400
TTAGAAAAAT TTACAGCTAG TTACGGATTA GGCTTAGATA GTGTTATATT CAATATGGAT      2460
GGAACGATTG AATTAAGATT GCCAAGTGGA GAAGTGATAA AAAAGAATTT ATTGATCTCA      2520
TAGCGTAA   (SEQ ID NO : 15)                                           2528
```

FIGURE 18

```
CAYALNQHRS QENKDNNRVS YVDGSQSSQK SENLTPDQVS QKEGIQAEQI        50
VIKITDQGYV TSHGDHYHYY NGKVPYDALF SEELLMKDPN YQLKDADIVN       100
EVKGGYIIKV DGKYYVYLKD AAHADNVRTK DEINRQKQEH VKDNEKVNSN       150
VAVARSQGRY TTNDGYVFNP ADIIEDTGNA YIVPHGGHYH YIPKSDLSAS       200
ELAAAKAHLA GKNMQPSQLS YSSTPSPSLP INPGTSHEKH EEDGYGFDAN       250
RIIAEDESGF VMSHGDHNHY FFKKDLTEEQ IKAAQKHLEE VKTSHNGLDS       300
LSSHEQDYPS NAKEMKDLDK KIEEKIAGIM KQYGVKRESI VVNKEKNAII       350
YPHGDHHHAD PIDEHKPVGI GHSHSNYELF KPEEGVAKKE GNKVYTGEEL       400
TNVVNLLKNS TFNNQNFTLA NGQKRVSFSF PPELEKKLGI NMLVKLITPD       450
GKVLEKVSGK VFGEGVGNIA NFELDQPYLP GQTFKYTIAS KDYPEVSYDG       500
TFTVPTSLAY KMASQTIFYP FHAGDTYLRV NPQFAVPKGT DALVRVFDEF       550
HGNAYLENNY KVGEIKLPIP KLNQGTTRTA GNKIPVTFMA NAYLDNQSTY       600
IVEVPILEKE NQTDKPSILP QFKRNKAQEN SKLDEKVEEP KTSEKVEKEK       650
LSETGNSTSN STLEEVPTVD PVQEKVAKFA ESYGMKLENV LFNMDGTIEL       700
YLPSGEVIKK NMADFTGEAP QGNGENKPSE NGKVSTGTVE NQPTENKPAD       750
SLPEAPNEKP VKPENSTDNG MLNPEGNVGS DPMLDSALEE APAVDPVQEK       800
LEKFTASYGL GLDSVIFNMD GTIELRLPSG EVIKKNLLIS                  840
(SEQ ID NO : 16)
```

FIGURE 19

```
CAYALNQHRS QENKDNNRVS YVDGSQSSQK SENLTPDQVS QKEGIQAEQI        50
VIKITDQGYV TSHGDHYHYY NGKVPYDALF SEELLMKDPN YQLKDADIVN       100
EVKGGYIIKV DGKYYVYLKD AAHADNVRTK DEINRQKQEH VKDNEKVNSN       150
VAVARSQGRY TTNDGYVFNP ADIIEDTGNA YIVPHGGHYH YIPKSDLSAS       200
ELAAAKAHLA GKNMQPSQLS YSSTASDNNT QSVAKGSTSK PANKSENLQS       250
LLKELYDSPS AQRYSESDGL VFDPAKIISR TPNGVAIPHG DHYHFIPYSK       300
LSALEEKIAR MVPISGTGST VSTNAKPNEV VSSLGSLSSN PSSLTTSKEL       350
SSASDGYIFN PKDIVEETAT AYIVRHGDHF HYIPKSNQIG QPTLPNNSLA       400
TPSPSLPINP GTSHEKHEED GYGFDANRII AEDESGFVMS HGDHNHYFFK       450
KDLTEEQIKA AQKHLEEVKT SHNGLDSLSS HEQDYPGNAK EMKDLDKKIE       500
EKIAGIMKQY GVKRESIVVN KEKNAIIYPH GDHHHADPID EHKPVGIGHS       550
HSNYELFKPE EGVAKKEGNK VYTGEELTNV VNLLKNSTFN NQNFTLANGQ       600
KRVSFSFPPE LEKKLGINML VKLITPDGKV LEKVSGKVFG EGVGNIANFE       650
LDQPYLPGQT FKYTIASKDY PEVSYDGTFT VPTSLAYKMA SQTIFYPFHA       700
GDTYLRVNPQ FAVPKGTDAL VRVFDEFHGN AYLENNYKVG EIKLPIPKLN       750
QGTTRTAGNK IPVTFMANAY LDNQSTYIVE VPILEKENQT DKPSILPQFK       800
RNKAQENSKL DEKVEEPKTS EKVEKEKLSE TGNSTSNSTL EEVPTVDPVQ       850
EKVAKFAESY GMKLENVLFN MDGTIELYLP SGEVIKKNMA DFTGEAPQGN       900
GENKPSENGK VSTGTVENQP TENKPADSLP EAPNEKPVKP ENSTDNGMLN       950
PEGNVGSDPM LDPALEEAPA VDPVQEKLEK FTASYGLGLD SVIFNMDGTI      1000
ELRLPSGEVI KKNLSDFIA   (SEQ ID NO : 55)                     1019
```

FIGURE 20

```
CAYALNQHRS QENKDNNRVS YVDGSQSSQK SENLTPDQVS QKEGIQAEQI        50
VIKITDQGYV TSHGDHYHYY NGKVPYDALF SEELLMKDPN YQLKDADIVN       100
EVKGGYIIKV DGKYYVYLKD AAHADNVRTK DEINRQKQEH VKDNEKVNSN       150
VAVARSQGRY TTNDGYVFNP ADIIEDTGNA YIVPHGGHYH YIPKSDLSAS       200
ELAAAKAHLA GKNMQPSQLS YSSTASDNNT QSVAKGSTSK PANKSENLQS       250
LLKELYDSPS AQRYSESDGL VFDPAKIISR TPNGVAIPHG DHYHFIPYSK       300
LSALEEKIAR MVPISGTGST VSTNAKPNEV VSSLGSLSSN PSSLTTSKEL       350
SSASDGYIFN PKDIVEETAT AYIVRHGDHF HYIPKSNQIG QPTLPNNSLA       400
TPSPSLPINP GTSHEKHEED GYGFDANRII AEDESGFVMS HGDHNHYFFK       450
KDLTEEQIKA AQKHLEEVKT SHNGLDSLSS HEQDYPGNA                   489
(SEQ ID NO : 56)
```

FIGURE 21

```
MKFSKKYIAA GSAVIVSLSL CAYALNQHRS QENKDNNRVS YVDGSQSSQK SENLTPDQVS        60
QKEGIQAEQI VIKITDQGYV TSHGDHYHYY NGKVPYDALF SEELLMKDPN YQLKDADIVN       120
EVKGGYIIKV DGKYYVYLKD AAHADNVRTK DEINRQKQEH VKDNEKVNSN VAVARSQGRY       180
TTNDGYVFNP ADIIEDTGNA YIVPHGGHYH YIPKSDLSAS ELAAAKAHLA GKNMQPSQLS       240
YSSTASDNNT QSVAKGSTSK PANKSENLQS LLKELYDSPS AQRYSESDGL VFDPAKIISR       300
TPNGVAIPHG DHYHFIPYSK LSALEEKIAR MVPISGTGST VSTNAKPNEV VSSLGSLSSN       360
PSSLTTSKEL SSASDGYIFN PKDIVEETAT AYIVRHGDHF HYIPKSNQIG QPTLPNNSLA       420
TPSPSLPINP GTSHEKHEED GYGFDANRII AEDESGFVMS HGDHNHYFFK KDLTEEQIKA       480
AQKHLEEVKT SHNGLDSLSS HEQDYPGNA   (SEQ ID NO : 57)                     509
```

FIGURE 22

```
DLTEEQIKAA QKHLEEVKTS HNGLDSLSSH EQDYPGNAKE MKDLDKKIEE        50
KIAGIMKQYG VKRESIVVNK EKNAIIYPHG DHHHADPIDE HKPVGIGHSH       100
SNYELFKPEE GVAKKEGNKV YTGEELTNVV NLLKNSTFNN QNFTLANGQK       150
RVSFSFPPEL EKKLGINMLV KLITPDGKVL EKVSGKVFGE GVGNIANFEL       200
DQPYLPGQTF KYTIASKDYP EVSYDGTFTV PTSLAYKMAS QTIFYPFHAG       250
DTYLRVNPQF AVPKGTDALV RVFDEFHGNA YLENNYKVGE IKLPIPKLNQ       300
GTTRTAGNKI PVTFMANAYL DNQSTYIVEV PILEKENQTD KPSILPQFKR       350
NKAQENSKLD EKVEEPKTSE KVEKEKLSET GNSTSNSTLE EVPTVDPVQE       400
KVAKFAESYG MKLENVLFNM DGTIELYLPS GEVIKKNMAD FTGEAPQGNG       450
ENKPSENGKV STGTVENQPT ENKPADSLPE APNEKPVKPE NSTDNGMLNP       500
EGNVGSDPML DPALEEAPAV DPVQEKLEKF TASYGLGLDS VIFNMDGTIE       550
LRLPSGEVIK KNLSDFIAKL RYRSNHWVPD SRPEEPSPQP TPEPSPSPQP       600
APNPQPAPSN PIDEKLVKEA VRKVGDGYVF EENGVSRYIP AKNLSAETAA       650
GIDSKLAKQE SLSHKLGAKK TDLPSSDREF YNKAYDLLAR IHQDLLDNKG       700
RQVDFEALDN LLERLKDVSS DKVKLVDDIL AFLAPIRHPE RLGKPNAQIT       750
YTDDEIQVAK LAGKYTTEDG YIFDPRDITS DEGDAYVTPH MTHSHWIKKD       800
SLSEAERAAA QAYAKEKGLT PPSTDHQDSG NTEAKGAEAI YNRVKAAKKV       850
PLDRMPYNLQ YTVEVKNGSL IIPHYDHYHN IKFEWFDEGL YEAPKGYTLE       900
DLLATVKYYV EHPNERPHSD NGFGNASDHV QRNKNGQADT NQTEKPSEEK       950
PQTEKPEEET PREEKPQSEK PESPKPTEEP EEESPEESEE PQVETEKVEE      1000
KLREAEDLLG KIQDPIIKSN AKETLTGLKN NLLFGTQDNN TIMAEAEKLL      1050
ALLKESK   (SEQ ID NO : 58)                                   1057
```

FIGURE 23

```
CAYALNQHRS QENKDNNRVS YVDGSQSSQK SENLTPDQVS QKEGIQAEQI        50
VIKITDQGYV TSHGDHYHYY NGKVPYDALF SEELLMKDPN YQLKDADIVN       100
EVKGGYIIKV DGKYYVYLKD AAHADNVRTK DEINRQKQEH VKDNEKVNSN       150
VAVARSQGRY TTNDGYVFNP ADIIEDTGNA YIVPHGGHYH YIPKSDLSAS       200
ELAAA   (SEQ ID NO :  59)                                    205
```

FIGURE 24

```
CAYELGLHQA QTVKENNRVS YIDGKQATQK TENLTPDEVS KREGINAEQI        50
VIKITDQGYV TSHGDHYHYY NGKVPYDAII SEELLMKDPN YQLKDSDIVN       100
EIKGGYVIKV NGKYYVYLKD AAHADNVRTK EEINRQKQEH SQHREGGTSA       150
NDGAVAFARS QGRYTTDDGY IFNASDIIED TGDAYIVPHG DHYHYIPKNE       200
LSASELAAAE AFLSGRENLS NLRTYRRQNS DNTPRTNWVP SVSNPGTTNT       250
NTSNNSNTNS QASQSNDIDS LLKQLYKLPL SQRHVESDGL IFDPAQITSR       300
TARGVAVPHG NHYHFIPYEQ MSELEKRIAR IIPLRYRSNH WVPDSRPEEP       350
SPQPTPEPSP SPQPAPNPQP APSNPIDEKL VKEAVRKVGD GYVFEENGVS       400
RYIPAKNLSA ETAAGIDSKL AKQESLSHKL GAKKTDLPSS DREFYNKAYD       450
LLARIHQDLL DNKGRQVDFE ALDNLLERLK DVSSDKVKLV DDILAFLAPI       500
RHPERLGKPN AQITYTDDEI QVAKLAGKYT TEDGYIFDPR DITSDEGDAY       550
VTPHMTHSHW IKKDSLSEAE RAAAQAYAKE KGLTPPSTDH QDSGNTEAKG       600
AEAIYNRVKA AKKVPLDRMP YNLQYTVEVK NGSLIIPHYD HYHNIKFEWF       650
DEGLYEAPKG YTLEDLLATV KYYVEHPNER PHSDNGFGNA SDHVQRNKNG       700
QADTNQTEKP SEEKPQTEKP EEETPREEKP QSEKPESPKP TEEPEEESPE       750
ESEEPQVETE KVEEKLREAE DLLGKIQDPI IKSNAKETLT GLKNNLLFGT       800
QDNNTIMAEA EKLLALLKES K    ((SEQ ID NO : 60)                 821
```

FIGURE 25

```
CAYELGLHQA QTVKENNRVS YIDGKQATQK TENLTPDEVS KREGINAEQI        50
VIKITDQGYV TSHGDHYHYY NGKVPYDAII SEELLMKDPN YQLKDSDIVN       100
EIKGGYVIKV NGKYYVYLKD AAHADNVRTK EEINRQKQEH SQHREGGTSA       150
NDGAVAFARS QGRYTTDDGY IFNASDIIED TGDAYIVPHG DHYHYIPKNE       200
LSASELAAAE AFLSGRENLS NLRTYRRQNS DNTPRTNWVP SVSNPGTTNT       250
NTSNNSNTNS QASQSNDIDS LLKQLYKLPL SQRHVESDGL IFDPAQITSR       300
TARGVAVPHG NHYHFIPYEQ MSELEKRIAR IIPL                        334
(SEQ ID NO : 61)
```

FIGURE 26

```
RYRSNHWVPD SRPEEPSPQP TPEPSPSPQP APNPQPAPSN PIDEKLVKEA        50
VRKVGDGYVF EENGVSRYIP AKNLSAETAA GIDSKLAKQE SLSHKLGAKK       100
TDLPSSDREF YNKAYDLLAR IHQDLLDNKG RQVDFEALDN LLERLKDVSS       150
DKVKLVDDIL AFLAPIRHPE RLGKPNAQIT YTDDEIQVAK LAGKYTTEDG       200
YIFDPRDITS DEGDAYVTPH MTHSHWIKKD SLSEAERAAA QAYAKEKGLT       250
PPSTDHQDSG NTEAKGAEAI YNRVKAAKKV PLDRMPYNLQ YTVEVKNGSL       300
IIPHYDHYHN IKFEWFDEGL YEAPKGYTLE DLLATVKYYV EHPNERPHSD       350
NGFGNASDHV QRNKNGQADT NQTEKPSEEK PQTEKPEEET PREEKPQSEK       400
PESPKPTEEP EEESPEESEE PQVETEKVEE KLREAEDLLG KIQDPIIKSN       450
AKETLTGLKN NLLFGTQDNN TIMAEAEKLL ALLKESK                     487
(SEQ ID NO : 62)
```

FIGURE 27

```
AEAFLSGREN LSNLRTYRRQ NSDNTPRTNW VPSVSNPGTT NTNTSNNSNT        50
NSQASQSNDI DSLLKQLYKL PLSQRHVESD GLIFDPAQIT SRTARGVAVP       100
HGNHYHFIPY EQMSELEKRI ARIIPLRYRS NHWVPDSRPE EPSPQPTPEP       150
SPSPQPAPNP QPAPSNPIDE KLVKEAVRKV GDGYVFEENG VSRYIPAKNL       200
SAETAAGIDS KLAKQESLSH KLGAKKTDLP SSDREFYNKA YDLLARIHQD       250
LLDNKGRQVD FEALDNLLER LKDVSSDKVK LVDDILAFLA PIRHPERLGK       300
PNAQITYTDD EIQVAKLAGK YTTEDGYIFD PRDITSDEGD AYVTPHMTHS       350
HWIKKDSLSE AERAAAQAYA KEKGLTPPST DHQDSGNTEA KGAEAIYNRV       400
KAAKKVPLDR MPYNLQYTVE VKNGSLIIPH YDHYHNIKFE WFDEGLYEAP       450
KGYTLEDLLA TVKYYVEHPN ERPHSDNGFG NASDHVQRNK NGQADTNQTE       500
KPSEEKPQTE KPEEETPREE KPQSEKPESP KPTEEPEEES PEESEEPQVE       550
TEKVEEKLRE AEDLLGKIQD PIIKSNAKET LTGLKNNLLF GTQDNNTIMA       600
EAEKLLALLK ESK   (SEQ ID NO : 63)                            613
```

FIGURE 28

```
DLTEEQIKAA QKHLEEVKTS HNGLDSLSSH EQDYPGNAKE MKDLDKKIEE        50
KIAGIMKQYG VKRESIVVNK EKNAIIYPHG DHHHADPIDE HKPVGIGHSH       100
SNYELFKPEE GVAKKEGNKV YTGEELTNVV NLLKNSTFNN QNFTLANGQK       150
RVSFSFPPEL EKKLGINMLV KLITPDGKVL EKVSGKVFGE GVGNIANFEL       200
DQPYLPGQTF KYTIASKDYP EVSYDGTFTV PTSLAYKMAS QTIFYPFHAG       250
DTYLRVNPQF AVPKGTDALV RVFDEFHGNA YLENNYKVGE IKLPIPKLNQ       300
GTTRTAGNKI PVTFMANAYL DNQSTYIVEV PILEKENQTD KPSILPQFKR       350
NKAQENSKLD EKVEEPKTSE KVEKEKLSET GNSTSNSTLE EVPTVDPVQE       400
KVAKFAESYG MKLENVLFNM DGTIELYLPS GEVIKKNMAD FTGEAPQGNG       450
ENKPSENGKV STGTVENQPT ENKPADSLPE APNEKPVKPE NSTDNGMLNP       500
EGNVGSDPML DPALEEAPAV DPVQEKLEKF TASYGLGLDS VIFNMDGTIE       550
LRLPSGEVIK KNLSDFIA   (SEQ ID NO : 64)                       568
```

FIGURE 29

```
DLTEEQIKAA QKHLEEVKTS HNGLDSLSSH EQDYPGNAKE MKDLDKKIEE        50
KIAGIMKQYG VKRESIVVNK EKNAIIYPHG DHHHADPIDE HKPVGIGHSH       100
SNYELFKPEE GVAKKEGNKV YTGEELTNVV NLLKNSTFNN QNFTLANGQK       150
RVSFSFPPEL EKKLGINMLV KLITPDGKVL EKVSGKVFGE GVGNIANFEL       200
DQPYLPGQTF KYTIASKDYP EVSYDGTFTV PTSLAYKMAS QTIFYPFHAG       250
DTYLRVNPQF AVPKGTDALV RVFDEFHGNA YLENNYKVGE IKLPIPKLNQ       300
GTTRTAGNKI PVTFMANAYL DNQSTYIVE   (SEQ ID NO : 65)           329
```

FIGURE 30

EVPILEKENQ TDKPSILPQF KRNKAQENSK LDEKVEEPKT SEKVEKEKLS 50
ETGNSTSNST LEEVPTVDPV QEKVAKFAES YGMKLENVLF NMDGTIELYL 100
PSGEVIKKNM ADFTGEAPQG NGENKPSENG KVSTGTVENQ PTENKPADSL 150
PEAPNEKPVK PENSTDNGML NPEGNVGSDP MLDPALEEAP AVDPVQEKLE 200
KFTASYGLGL DSVIFNMDGT IELRLPSGEV IKKNLSDFIA 240
(SEQ ID NO : 66)

FIGURE 31

DIDSLLKQLY KLPLSQRHVE SDGLIFDPAQ ITSRTARGVA VPHGNHYHFI 50
PYEQMSELEK RIARIIPLRY RSNHWVPDSR PEEPSPQPTP EPSPSPQPAP 100
NPQPAPSNPI DEKLVKEAVR KVGDGYVFEE NGVSRYIPAK NLSAETAAGI 150
DSKLAKQESL SHKLGAKKTD LPSSDREFYN KAYDLLARIH QDLLDNKGRQ 200
VDFEALDNLL ERLKDVSSDK VKLVDDILAF LAPIRHPERL GKPNAQITYT 250
DDEIQVAKLA GKYTTEDGYI FDPRDITSDE GDAYVTPHMT HSHWIKKDSL 300
SEAERAAAQA YAKEKGLTPP STDHQDSGNT EAKGAEAIYN RVKAAKKVPL 350
DRMPYNLQYT VEVKNGSLII PHYDHYHNIK FEWFDEGLYE APKGYTLEDL 400
LATVKYYVEH PNERPHSDNG FGNASDHVQR NKNGQADTNQ TEKPSEEKPQ 450
TEKPEEETPR EEKPQSEKPE SPKPTEEPEE ESPEESEEPQ VETEKVEEKL 500
REAEDLLGKI QDPIIKSNAK ETLTGLKNNL LFGTQDNNTI MAEAEKLLAL 550
LKESK (SEQ ID NO : 67) 555

FIGURE 32

DIDSLLKQLY KLPLSQRHVE SDGLIFDPAQ ITSRTARGVA VPHGNHYHFI 50
PYEQMSELEK RIARIIPLRY RSNHWVPDSR PEEPSPQPTP EPSPSPQPAP 100
NPQPAPSNPI DEKLVKEAVR KVGDGYVFEE NGVSRYIPAK NLSAETAAGI 150
DSKLAKQESL SHKLGAKKTD LPSSDREFYN KAYDLLARIH QDLLDNKGRQ 200
VDFEALDNLL ERLKDVSSDK VKLVDDILAF LAPIRHPERL GKPNAQITYT 250
DDEIQVAKLA GKYTTEDGYI FDPRDITSDE GDAYVTPHMT HSHWIKKDSL 300
SEAERAAAQA YAKEKGLTPP STDHQDSGNT EAKGAEAIYN RVKAAKKVPL 350
DRMPYNLQYT VEVKNGSLII PHYDHYHNIK FEWFDEGLYE APKGYTLEDL 400
LATVKYYVEH PNERPHSDNG FGNASDHV (SEQ ID NO : 68) 428

FIGURE 33

GLYEAPKGYT LEDLLATVKY YVEHPNERPH SDNGFGNASD HVQRNKNGQA 50
DTNQTEKPSE EKPQTEKPEE ETPREEKPQS EKPESPKPTE EPEEESPEES 100
EEPQVETEKV EEKLREAEDL L (SEQ ID NO : 69) 121

FIGURE 34

ASDHVQRNKN GQADTNQTEK PSEEKPQTEK PEEETPREEK PQSEKPESPK 50
PTEEPEEESP EESEEPQVET EKVEEKLREA EDLLGKIQDP IIKSNAKETL 100
TGLKNNLLFG TQDNNTIMAE AEKLLALLKE SK 132
(SEQ ID NO : 70)

FIGURE 35

DIDSLLKQLY KLPLSQRHVE SDGLIFDPAQ ITSRTARGVA VPHGNHYHFI 50
PYEQMSELEK RIARIIPLRY RSNHWVPDSR PEEPSPQPTP EPSPSPQPAP 100
NPQPAPSNPI DEKLVKEAVR KVGDGYVFEE NGVSRYIPAK NLSAETAAGI 150
DSKLAKQESL SHKLGAKKTD LPSSDREFYN KAYDLLARIH QDLLDNKGRQ 200
VDFEALDNLL ERLKDVSSDK VKLVDD (SEQ ID NO : 71) 226

FIGURE 36

DILAFLAPIR HPERLGKPNA QITYTDDEIQ VAKLAGKYTT EDGYIFDPRD 50
ITSDEGDAYV TPHMTHSHWI KKDSLSEAER AAAQAYAKEK GLTPPSTDHQ 100
DSGNTEAKGA EAIYNRVKAA KKVPLDRMPY NLQYTVEVKN GSLIIPHYDH 150
YHNIKFEWFD EGLYEAPKGY TLEDLLATVK YYVEHPNERP HSDNGFGNAS 200
DHV (SEQ ID NO : 72) 203

FIGURE 37

CSYELGRHQA GQVKKESNRV SYIDGDQAGQ KAENLTPDEV SKREGINAEQ 50
IVIKITDQGY VTSHGDHYHY YNGKVPYDAI ISEELLMKDP NYQLKDSDIV 100
NEIKGGYVIK VDGKYYVYLK DAAHADNIRT KEEIKRQKQE HSHNHNSRAD 150
NAVAAARAQG RYTTDDGYIF NASDIIEDTG DAYIVPHGDH YHYIPKNELS 200
ASELAAAEAY WNGKQGSRPS SSSSYNANPV QPRLSENHNL TVTPTYHQNQ 250
GENISSLLRE LYAKPLSERH VESDGLIFDP AQITSRTARG VAVPHGNHYH 300
FIPYEQMSEL EKRIARIIPL RYRSNHWVPD SRPEQPSPQS TPEPSPSLQP 350
APNPQPAPSN PIDEKLVKEA VRKVGDGYVF EENGVSRYIP AKDLSAETAA 400
GIDSKLAKQE SLSHKLGAKK TDLPSSDREF YNKAYDLLAR IHQDLLDNKG 450
RQVDFEVLDN LLERLKDVSS DKVKLVDDIL AFLAPIRHPE RLGKPNAQIT 500
YTDDEIQVAK LAGKYTTEDG YIFDPRDITS DEGDAYVTPH MTHSHWIKKD 550
SLSEAERAAA QAYAKEKGLT PPSTDHQDSG NTEAKGAEAI YNRVKAAKKV 600
PLDRMPYNLQ YTVEVKNGSL IIPHYDHYHN IKFEWFDEGL YEAPKGYSLE 650
DLLATVKYYV EHPNERPHSD NGFGNASDHV RKNKADQDSK PDEDKEHDEV 700
SEPTHPESDE KENHAGLNPS ADNLYKPSTD TEETEEEAED TTDEAEIPQV 750
ENSVINAKIA DAEALLEKVT DPSIRQNAME TLTGLKSSLL LGTKDNNTIS 800
AEVDSLLALL KESQPAPIQ (SEQ ID NO : 73) 819

FIGURE 38

ENISSLLREL YAKPLSERHV ESDGLIFDPA QITSRTARGV AVPHGNHYHF 50
IPYEQMSELE KRIARIIPLR YRSNHWVPDS RPEQPSPQST PEPSPSLQPA 100
PNPQPAPSNP IDEKLVKEAV RKVGDGYVFE ENGVSRYIPA KDLSAETAAG 150
IDSKLAKQES LSHKLGAKKT DLPSSDREFY NKAYDLLARI HQDLLDNKGR 200
QVDFEVLDNL LERLKDVSSD KVKLVDDILA FLAPIRHPER LGKPNAQITY 250
TDDEIQVAKL AGKYTTEDGY IFDPRDITSD EGDAYVTPHM THSHWIKKDS 300
LSEAERAAAQ AYAKEKGLTP PSTDHQDSGN TEAKGAEAIY NRVKAAKKVP 350
LDRMPYNLQY TVEVKNGSLI IPHYDHYHNI KFEWFDEGLY EAPKGYSLED 400
LLATVKYYVE HPNERPHSDN GFGNASDHVR KNKADQDSKP DEDKEHDEVS 450
EPTHPESDEK ENHAGLNPSA DNLYKPSTDT EETEEEAEDT TDEAEIPQVE 500
NSVINAKIAD AEALLEKVTD PSIRQNAMET LTGLKSSLLL GTKDNNTISA 550
EVDSLLALLK ESQPAPIQ (SEQ ID NO : 74) 568

FIGURE 39

```
VRKNKADQDS KPDEDKEHDE VSEPTHPESD EKENHAGLNP SADNLYKPST        50
DTEETEEEAE DTTDEAEIPQ VENSVINAKI ADAEALLEKV TDPSIRQNAM       100
ETLTGLKSSL LLGTKDNNTI SAEVDSLLAL LKESQPAPIQ                  140
(SEQ ID NO : 75)
```

FIGURE 40

```
GACTTGACAG AAGAGCAAAT TAAGGCTGCG CAAAAACATT TAGAGGAAGT        50
TAAAACTAGT CATAATGGAT TAGATTCTTT GTCATCTCAT GAACAGGATT       100
ATCCAGGTAA TGCCAAAGAA ATGAAAGATT TAGATAAAAA AATCGAAGAA       150
AAAATTGCTG GCATTATGAA ACAATATGGT GTCAAACGTG AAAGTATTGT       200
CGTGAATAAA GAAAAAAATG CGATTATTTA TCCGCATGGA GATCACCATC       250
ATGCAGATCC GATTGATGAA CATAAACCGG TTGGAATTGG TCATTCTCAC       300
AGTAACTATG AACTGTTTAA ACCCGAAGAA GGAGTTGCTA AAAAAGAAGG       350
GAATAAAGTT TATACTGGAG AAGAATTAAC GAATGTTGTT AATTTGTTAA       400
AAAATAGTAC GTTTAATAAT CAAAACTTTA CTCTAGCCAA TGGTCAAAAA       450
CGCGTTTCTT TTAGTTTTCC GCCTGAATTG GAGAAAAAAT TAGGTATCAA       500
TATGCTAGTA AAATTAATAA CACCAGATGG AAAAGTATTG GAGAAAGTAT       550
CTGGTAAAGT ATTTGGAGAA GGAGTAGGGA ATATTGCAAA CTTTGAATTA       600
GATCAACCTT ATTTACCAGG ACAAACATTT AAGTATACTA TCGCTTCAAA       650
AGATTATCCA GAAGTAAGTT ATGATGGTAC ATTTACAGTT CCAACCTCTT       700
TAGCTTACAA AATGGCCAGT CAAACGATTT TCTATCCTTT CCATGCAGGG       750
GATACTTATT TAAGAGTGAA CCCTCAATTT GCAGTGCCTA AAGGAACTGA       800
TGCTTTAGTC AGAGTGTTTG ATGAATTTCA TGGAAATGCT TATTTAGAAA       850
ATAACTATAA AGTTGGTGAA ATCAAATTAC CGATTCCGAA ATTAAACCAA       900
GGAACAACCA GAACGGCCGG AAATAAAATT CCTGTAACCT TCATGGCAAA       950
TGCTTATTTG GACAATCAAT CGACTTATAT TGTGGAAGTA CCTATCTTGG      1000
AAAAAGAAAA TCAAACTGAT AAACCAAGTA TTCTACCACA ATTTAAAAGG      1050
AATAAAGCAC AAGAAAACTC AAAACTTGAT GAAAAGGTAG AAGAACCAAA      1100
GACTAGTGAG AAGGTAGAAA AAGAAAAACT TTCTGAAACT GGGAATAGTA      1150
CTAGTAATTC AACGTTAGAA GAAGTTCCTA CAGTGGATCC TGTACAAGAA      1200
AAAGTAGCAA AATTTGCTGA AAGTTATGGG ATGAAGCTAG AAAATGTCTT      1250
GTTTAATATG GACGGAACAA TTGAATTATA TTTACCATCA GGAGAAGTCA      1300
TTAAAAAGAA TATGGCAGAT TTTACAGGAG AAGCACCTCA AGGAAATGGT      1350
GAAAATAAAC CATCTGAAAA TGGAAAAGTA TCTACTGGAA CAGTTGAGAA      1400
CCAACCAACA GAAAATAAAC CAGCAGATTC TTTACCAGAG GCACCAAACG      1450
AAAAACCTGT AAAACCAGAA AACTCAACGG ATAATGGAAT GTTGAATCCA      1500
GAAGGGAATG TGGGGAGTGA CCCTATGTTA GATCCAGCAT TAGAGGAAGC      1550
TCCAGCAGTA GATCCTGTAC AAGAAAAATT AGAAAAATTT ACAGCTAGTT      1600
ACGGATTAGG CTTAGATAGT GTTATATTCA ATATGGATGG AACGATTGAA      1650
TTAAGATTGC CAAGTGGAGA AGTGATAAAA AAGAATTTAT CTGATTTCAT      1700
AGCGAAGCTT CGTTATCGTT CAAACCATTG GGTACCAGAT TCAAGACCAG      1750
AAGAACCAAG TCCACAACCG ACTCCAGAAC CTAGTCCAAG TCCGCAACCT      1800
GCACCAAATC CTCAACCAGC TCCAAGCAAT CCAATTGATG AGAAATTGGT      1850
CAAAGAAGCT GTTCGAAAAG TAGGCGATGG TTATGTCTTT GAGGAGAATG      1900
GAGTTTCTCG TTATATCCCA GCCAAGAATC TTTCAGCAGA AACAGCAGCA      1950
GGCATTGATA GCAAACTGGC CAAGCAGGAA AGTTTATCTC ATAAGCTAGG      2000
AGCTAAGAAA ACTGACCTCC CATCTAGTGA TCGAGAATTT TACAATAAGG      2050
CTTATGACTT ACTAGCAAGA ATTCACCAAG ATTTACTTGA TAATAAAGGT      2100
CGACAAGTTG ATTTTGAGGC TTTGGATAAC CTGTTGGAAC GACTCAAGGA      2150
TGTCTCAAGT GATAAAGTCA AGTTAGTGGA TGATATTCTT GCCTTCTTAG      2200
CTCCGATTCG TCATCCAGAA CGTTTAGGAA AACCAAATGC GCAAATTACC      2250
TACACTGATG ATGAGATTCA AGTAGCCAAG TTGGCAGGCA AGTACACAAC      2300
AGAAGACGGT TATATCTTTG ATCCTCGTGA TATAACCAGT GATGAGGGGG      2350
ATGCCTATGT AACTCCACAT ATGACCCATA GCCACTGGAT TAAAAAAGAT      2400
```

```
AGTTTGTCTG AAGCTGAGAG AGCGGCAGCC CAGGCTTATG CTAAAGAGAA     2450
AGGTTTGACC CCTCCTTCGA CAGACCATCA GGATTCAGGA AATACTGAGG     2500
CAAAAGGAGC AGAAGCTATC TACAACCGCG TGAAAGCAGC TAAGAAGGTG     2550
CCACTTGATC GTATGCCTTA CAATCTTCAA TATACTGTAG AAGTCAAAAA     2600
CGGTAGTTTA ATCATACCTC ATTATGACCA TTACCATAAC ATCAAATTTG     2650
AGTGGTTTGA CGAAGGCCTT TATGAGGCAC CTAAGGGGTA TACTCTTGAG     2700
GATCTTTTGG CGACTGTCAA GTACTATGTC GAACATCCAA ACGAACGTCC     2750
GCATTCAGAT AATGGTTTTG GTAACGCTAG CGACCATGTT CAAAGAAACA     2800
AAAATGGTCA AGCTGATACC AATCAAACGG AAAAACCAAG CGAGGAGAAA     2850
CCTCAGACAG AAAAACCTGA GGAAGAAACC CCTCGAGAAG AGAAACCACA     2900
AAGCGAGAAA CCAGAGTCTC CAAAACCAAC AGAGGAACCA GAAGAAGAAT     2950
CACCAGAGGA ATCAGAAGAA CCTCAGGTCG AGACTGAAAA GGTTGAAGAA     3000
AAACTGAGAG AGGCTGAAGA TTTACTTGGA AAAATCCAGG ATCCAATTAT     3050
CAAGTCCAAT GCCAAAGAGA CTCTCACAGG ATTAAAAAAT AATTTACTAT     3100
TTGGCACCCA GGACAACAAT ACTATTATGG CAGAAGCTGA AAAACTATTG     3150
GCTTTATTAA AGGAGAGTAA G   (SEQ ID NO : 76)                 3171
```

FIGURE 41

```
EAYWNGKQGS RPSSSSSYNA NPVQPRLSEN HNLTVTPTYH QNQGENISSL      50
LRELYAKPLS ERHVESDGLI FDPAQITSRT ARGVAVPHGN HYHFIPYEQM     100
SELEKRIARI IPLRYRSNHW VPDSRPEQPS PQSTPEPSPS LQPAPNPQPA     150
PSNPIDEKLV KEAVRKVGDG YVFEENGVSR YIPAKDLSAE TAAGIDSKLA     200
KQESLSHKLG AKKTDLPSSD REFYNKAYDL LARIHQDLLD NKGRQVDFEV     250
LDNLLERLKD VSSDKVKLVD DILAFLAPIR HPERLGKPNA QITYTDDEIQ     300
VAKLAGKYTT EDGYIFDPRD ITSDEGDAYV TPHMTHSHWI KKDSLSEAER     350
AAAQAYAKEK GLTPPSTDHQ DSGNTEAKGA EAIYNRVKAA KKVPLDRMPY     400
NLQYTVEVKN GSLIIPHYDH YHNIKFEWFD EGLYEAPKGY SLEDLLATVK     450
YYVEHPNERP HSDNGFGNAS DHV   (SEQ ID NO : 77)               473
```

FIGURE 42

```
CAYALNQHRS QENKDNNRVS YVDGSQSSQK SENLTPDQVS QKEGIQAEQI        50
VIKITDQGYV TSHGDHYHYY NGKVPYDALF SEELLMKDPN YQLKDADIVN       100
EVKGGYIIKV DGKYYVYLKD AAHADNVRTK DEINRQKQEH VKDNEKVNSN       150
VAVARSQGRY TTNDGYVFNP ADIIEDTGNA YIVPHGGHYH YIPKSDLSAS       200
ELAAAKAHLA GKNMQPSQLS YSSTASDNNT QSVAKGSTSK PANKSENLQS       250
LLKELYDSPS AQRYSESDGL VFDPAKIISR TPNGVAIPHG DHYHFIPYSK       300
LSALEEKIAR MVPISGTGST VSTNAKPNEV VSSLGSLSSN PSSLTTSKEL       350
SSASDGYIFN PKDIVEETAT AYIVRHGDHF HYIPKSNQIG QPTLPNNSLA       400
TPSPSLPINP GTSHEKHEED GYGFDANRII AEDESGFVMS HGDHNHYFFK       450
KDLTEEQIKA AQKHLEEVKT SHNGLDSLSS HEQDYPGNAK EMKDLDKKIE       500
EKIAGIMKQY GVKRESIVVN KEKNAIIYPH GDHHHADPID EHKPVGIGHS       550
HSNYELFKPE EGVAKKEGNK VYTGEELTNV VNLLKNSTFN NQNFTLANGQ       600
KRVSFSFPPE LEKKLGINML VKLITPDGKV LEKVSGKVFG EGVGNIANFE       650
LDQPYLPGQT FKYTIASKDY PEVSYDGTFT VPTSLAYKMA SQTIFYPFHA       700
GDTYLRVNPQ FAVPKGTDAL VRVFDEFHGN AYLENNYKVG EIKLPIPKLN       750
QGTTRTAGNK IPVTFMANAY LDNQSTYIVE   (SEQ ID NO : 78)         780
```

FIGURE 43

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CAYELGLHQA QTVKENNRVS YIDGKQATQK TENLTPDEVS KREGINAEQI        50
VIKITDQGYV TSHGDHYHYY NGKVPYDAII SEELLMKDPN YQLKDSDIVN       100
EIKGGYVIKV NGKYYVYLKD AAHADNVRTK EEINRQKQEH SQHREGGTSA       150
NDGAVAFARS QGRYTTDDGY IFNASDIIED TGDAYIVPHG DHYHYIPKNE       200
LSASELAAAE AFLSGRENLS NLRTYRRQNS DNTPRTNWVP SVSNPGTTNT       250
NTSNNSNTNS QASQSNDIDS LLKQLYKLPL SQRHVESDGL IFDPAQITSR       300
TARGVAVPHG NHYHFIPYEQ MSELEKRIAR IIPLRYRSNH WVPDSRPEEP       350
SPQPTPEPSP SPQPAPNPQP APSNPIDEKL VKEAVRKVGD GYVFEENGVS       400
RYIPAKNLSA ETAAGIDSKL AKQESLSHKL GAKKTDLPSS DREFYNKAYD       450
LLARIHQDLL DNKGRQVDFE ALDNLLERLK DVSSDKVKLV DDILAFLAPI       500
RHPERLGKPN AQITYTDDEI QVAKLAGKYT TEDGYIFDPR DITSDEGDAY       550
VTPHMTHSHW IKKDSLSEAE RAAAQAYAKE KGLTPPSTDH QDSGNTEAKG       600
AEAIYNRVKA AKKVPLDRMP YNLQYTVEVK NGSLIIPHYD HYHNIKFEWF       650
DEGLYEAPKG YTLEDLLATV KYYVEHPNER PHSDNGFGNA                  690
(SEQ ID NO : 79)
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FIGURE 44

GTGAAGAAAA CATATGGTTA TATCGGCTCA GTTGCTGCCA TTTTACTAGC TACTCATATT 60
GGAAGTTACC AACTTGGTAA GCATCATATG GGTCTAGCAA CAAAGGACAA TCAGATTGCC 120
TATATTGATG ACAGCAAAGG TAAGGCAAAA GCCCCTAAAA CAAACAAAAC GATGGATCAA 180
ATCAGTGCTG AAGAAGGCAT CTCTGCTGAA CAGATCGTAG TCAAAATTAC TGACCAAGGC 240
TATGTGACCT CACACGGTGA CCATTATCAT TTTTACAATG GGAAAGTTCC TTATGATGCG 300
ATTATTAGTG AAGAGTTGTT GATGACGGAT CCTAATTACC GTTTTAAACA ATCAGACGTT 360
ATCAATGAAA TCTTAGACGG TTACGTTATT AAAGTCAATG GCAACTATTA TGTTTACCTC 420
AAGCCAGGTA GTAAGCGCAA AAACATTCGA ACCAAACAAC AAATTGCTGA GCAAGTAGCC 480
AAAGGAACTA AAGAAGCTAA AGAAAAAGGT TTAGCTCAAG TGGCCCATCT CAGTAAAGAA 540
GAAGTTGCGG CAGTCAATGA AGCAAAAAGA CAAGGACGCT ATACTACAGA CGATGGCTAT 600
ATTTTTAGTC CGACAGATAT CATTGATGAT TTAGGAGATG CTTATTTAGT ACCTCATGGT 660
AATCACTATC ATTATATTCC TAAAAAGGAT TTGTCTCCAA GTGAGCTAGC TGCTGCACAA 720
GCCTACTGGA GTCAAAAACA AGGTCGAGGT GCTAGACCGT CTGATTACCG CCCGACACCA 780
GCCCCAGGTC GTAGGAAAGC CCCAATTCCT GATGTGACGC CTAACCCTGG ACAAGGTCAT 840
CAGCCAGATA ACGGTGGCTA TCATCCAGCG CCTCCTAGGC CAAATGATGC GTCACAAAAC 900
AAACACCAAA GAGATGAGTT TAAAGGAAAA ACCTTTAAGG AACTTTTAGA TCAACTACAC 960
CGTCTTGATT TGAAATACCG TCATGTGGAA GAAGATGGGT TGATTTTTGA ACCGACTCAA 1020
GTGATCAAAT CAAACGCTTT TGGGTATGTG GTGCCTCATG GAGATCATTA TCATATTATC 1080
CCAAGAAGTC AGTTATCACC TCTTGAAATG GAATTAGCAG ATCGATACTT AGCTGGCCAA 1140
ACTGAGGACA ATGACTCAGG TTCAGAGCAC TCAAAACCAT CAGATAAAGA AGTGACACAT 1200
ACCTTTCTTG GTCATCGCAT CAAAGCTTAC GGAAAAGGCT TAGATGGTAA ACCATATGAT 1260
ACGAGTGATG CTTATGTTTT TAGTAAAGAA TCCATTCATT CAGTGGATAA ATCAGGAGTT 1320
ACAGCTAAAC ACGGAGATCA TTTCCACTAT ATAGGATTTG GAGAACTTGA ACAATATGAG 1380
TTGGATGAGG TCGCTAACTG GGTGAAAGCA AAAGGTCAAG CTGATGAGCT TGCTGCTGCT 1440
TTGGATCAGG AACAAGGCAA AGAAAAACCA CTCTTTGACA CTAAAAAAGT GAGTCGCAAA 1500
GTAACAAAAG ATGGTAAAGT GGGCTATATG ATGCCAAAAG ATGGTAAGGA CTATTTCTAT 1560
GCTCGTGATC AACTTGATTT GACTCAGATT GCCTTTGCCG AACAAGAACT AATGCTTAAA 1620
GATAAGAAGC ATTACCGTTA TGACATTGTT GACACAGGTA TTGAGCCACG ACTTGCTGTA 1680
GATGTGTCAA GTCTGCCGAT GCATGCTGGT AATGCTACTT ACGATACTGG AAGTTCGTTT 1740
GTTATCCCAC ATATTGATCA TATCCATGTC GTTCCGTATT CATGGTTGAC GCGCGATCAG 1800
ATTGCAACAG TCAAGTATGT GATGCAACAC CCCGAAGTTC GTCCGGATGT ATGGTCTAAG 1860
CCAGGGCATG AAGAGTCAGG TTCGGTCATT CCAAATGTTA CGCCTCTTGA TAAACGTGCT 1920
GGTATGCCAA ACTGGCAAAT TATCCATTCT GCTGAAGAAG TTCAAAAAGC CCTAGCAGAA 1980
GGTCGTTTTG CAACACCAGA CGGCTATATT TTCGATCCAC GAGATGTTTT GGCCAAAGAA 2040
ACTTTTGTAT GGAAAGATGG CTCCTTTAGC ATCCCAAGAG CAGATGGCAG TTCATTGAGA 2100
ACCATTAATA AATCTGATCT ATCCCAAGCT GAGTGGCAAC AAGCTCAAGA GTTATTGGCA 2160
AAGAAAAATA CTGGTGATGC TACTGATACG GATAAACCCA AAGAAAAGCA ACAGGCAGAT 2220
AAGAGCAATG AAAACCAACA GCCAAGTGAA GCCAGTAAAG AAGAAAAAGA ATCAGATGAC 2280
TTTATAGACA GTTTACCAGA CTATGGTCTA GATAGAGCAA CCCTAGAAGA TCATATCAAT 2340
CAATTAGCAC AAAAAGCTAA TATCGATCCT AAGTATCTCA TTTTCCAACC AGAAGGTGTC 2400
CAATTTTATA ATAAAAATGG TGAATTGGTA ACTTATGATA TCAAGACACT TCAACAAATA 2460
AACCCTTAA (SEQ ID NO : 80) 2469

FIGURE 45

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VKKTYGYIGS VAAILLATHI GSYQLGKHHM GLATKDNQIA YIDDSKGKAK        50
APKTNKTMDQ ISAEEGISAE QIVVKITDQG YVTSHGDHYH FYNGKVPYDA       100
IISEELLMTD PNYRFKQSDV INEILDGYVI KVNGNYYVYL KPGSKRKNIR       150
TKQQIAEQVA KGTKEAKEKG LAQVAHLSKE EVAAVNEAKR QGRYTTDDGY       200
IFSPTDIIDD LGDAYLVPHG NHYHYIPKKD LSPSELAAAQ AYWSQKQGRG       250
ARPSDYRPTP APGRRKAPIP DVTPNPGQGH QPDNGGYHPA PPRPNDASQN       300
KHQRDEFKGK TFKELLDQLH RLDLKYRHVE EDGLIFEPTQ VIKSNAFGYV       350
VPHGDHYHII PRSQLSPLEM ELADRYLAGQ TEDNDSGSEH SKPSDKEVTH       400
TFLGHRIKAY GKGLDGKPYD TSDAYVFSKE SIHSVDKSGV TAKHGDHFHY       450
IGFGELEQYE LDEVANWVKA KGQADELAAA LDQEQGKEKP LFDTKKVSRK       500
VTKDGKVGYM MPKDGKDYFY ARDQLDLTQI AFAEQELMLK DKKHYRYDIV       550
DTGIEPRLAV DVSSLPMHAG NATYDTGSSF VIPHIDHIHV VPYSWLTRDQ       600
IATVKYVMQH PEVRPDVWSK PGHEESGSVI PNVTPLDKRA GMPNWQIIHS       650
AEEVQKALAE GRFATPDGYI FDPRDVLAKE TFVWKDGSFS IPRADGSSLR       700
TINKSDLSQA EWQQAQELLA KKNTGDATDT DKPKEKQQAD KSNENQQPSE       750
ASKEEKESDD FIDSLPDYGL DRATLEDHIN QLAQKANIDP KYLIFQPEGV       800
QFYNKNGELV TYDIKTLQQI NPP   (SEQ ID NO : 81)                 823
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FIGURE 46

GTGAAGAAAA CATATGGTTA TATCGGCTCA GTTGCTGCCA TTTTACTAGC TACTCATATT 60
GGAAGTTACC AACTTGGTAA GCATCATATG GGTCTAGCAA CAAAGGACAA TCAGATTGCC 120
TATATTGATG ATAGCAAAGG TAAGGCAAAA GCCCCTAAAA CAAACAAAAC GATGGATCAA 180
ATCAGTGCTG AAGAAGGCAT CTCTGCTGAA CAGATCGTAG TCAAAATTAC TGACCAAGGT 240
TATGTGACCT CACACGGTGA CCATTATCAT TTTTACAATG GGAAAGTTCC TTATGATGCG 300
ATTATTAGTG AAGAGTTGTT GATGACGGAT CCTAATTACC ATTTTAAACA ATCAGACGTT 360
ATCAATGAAA TCTTAGACGG TTACGTTATT AAAGTCAATG GCAACTATTA TGTTTACCTC 420
AAGCCAGGTA GTAAGCGCAA AAACATTCGA ACCAAACAAC AAATTGCTGA GCAAGTAGCC 480
AAAGGAACTA AAGAAGCTAA AGAAAAAGGT TTAGCTCAAG TGGCCCATCT CAGTAAAGAA 540
GAAGTTGCGG CAGTCAATGA AGCAAAAAGA CAAGGACGCT ATACTACAGA CGATGGCTAT 600
ATTTTTAGTC CGACAGATAT CATTGATGAT TTAGGAGACG CTTATTTAGT ACCTCATGGT 660
AATCACTATC ATTATATTCC TAAAAAAGAT TTGTCTCCAA GTGAGCTAGC TGCTGCACAA 720
GCTTACTGGA GTCAAAAACA AGGTCGAGGT GCTAGACCGT CTGATTACCG CCCGACACCA 780
GCCCCAGGTC GTAGGAAAGC TCCAATTCCT GATGTGACGC CTAACCCTGG ACAAGGTCAT 840
CAGCCAGATA ACGGTGGCTA TCATCCAGCG CCTCCTAGGC CAAATGATGC GTCACAAAAC 900
AAACACCAAA GAGATGAGTT TAAAGGAAAA ACCTTTAAGG AACTTTTAGA TCAACTACAC 960
CGTCTTGATT TGAAATACCG TCATGTGGAA GAAGATGGGT TGATTTTTGA ACCGACTCAA 1020
GTGATCAAAT CAAACGCTTT TGGGTATGTG GTGCCTCATG GAGATCATTA TCATATTATC 1080
CCAAGAAGTC AGTTATCACC TCTTGAAATG GAATTAGCAG ATCGATACTT AGCCGGTCAA 1140
ACTGAGGACA ATGATTCAGG TTCAGATCAC TCAAAACCAT CAGATAAAGA AGTGACACAT 1200
ACCTTTCTTG GTCATCGCAT CAAAGCTTAC GGAAAAGGCT TAGATGGTAA ACCATATGAT 1260
ACGAGTGATG CTTATGTTTT TAGTAAAGAA TCCATTCATT CAGTGGATAA ATCAGGAGTT 1320
ACAGCTAAAC ACGGAGATCA TTTCCACTAT ATAGGATTTG GAGAACTTGA ACAATATGAG 1380
TTGGATGAGG TCGCTAACTG GGTGAAAGCA AAAGGTCAAG CTGATGAGCT TGCTGCTGCT 1440
TTGGATCAGG AACAAGGCAA AGAAAAACCA CTCTTTGACA CTAAAAAAGT GAGTCGCAAA 1500
GTAACAAAAG ATGGTAAAGT GGGCTATATT ATGCCAAAAG ATGGCAAGGA CTATTTCTAT 1560
GCTCGTGATC AACTTGATTT GACTCAGATT GCCTTTGCCG AACAAGAACT AATGCTTAAA 1620
GATAAGAACC ATTACCGTTA TGACATTGTT GACACAGGTA TTGAGCCACG ACTTGCTGTA 1680
GATGTGTCAA GTCTGCCGAT GCATGCTGGT AATGCTACTT ACGATACTGG AAGTTCGTTT 1740
GTTATCCCTC ATATTGATCA TATCCATGTC GTTCCGTATT CATGGTTGAC GCGCGATCAG 1800
ATTGCAACAA TCAAGTATGT GATGCAACAC CCCGAAGTTC GTCCAGATGT ATGGTCTAAG 1860
CCAGGGCATG AAGAGTCAGG TTCGGTCATT CCAAATGTTA CGCCTCTTGA TAAACGTGCT 1920
GGTATGCCAA ATTGGCAAAT CATCCATTCT GCTGAAGAAG TTCAAAAAGC CCTAGCAGAA 1980
GGTCGTTTTG CAACACCAGA CGGCTATATT TTCGATCCAC GAGATGTTTT GGCCAAAGAA 2040
ACTTTTGTAT GGAAAGATGG CTCCTTTAGC ATCCCAAGAG CAGATGGCAG TTCATTGAGA 2100
ACCATTAATA AATCTGATCT ATCCCAAGCT GAGTGGCAAC AAGCTCAAGA GTTATTGGCA 2160
AAGAAAAACG CTGGTGATGC TACTGATACG GATAAACCCA AAGAAAAGCA ACAGGCAGAT 2220
AAGAGCAATG AAAACCAACA GCCAAGTGAA GCCAGTAAAG AAGAAGAAAA AGAATCAGAT 2280
GACTTTATAG ACAGTTTACC AGACTATGGT CTAGATAGAG CAACCCTAGA AGATCATATC 2340
AATCAATTAG CACAAAAAGC TAATATCGAT CCTAAGTATC TCATTTTCCA ACCAGAAGGT 2400
GTCCAATTTT ATAATAAAAA TGGTGAATTA GTAACTTATG ATATCAAGAC GCTTCAACAA 2460
ATAAACCCTT AA (SEQ ID NO : 82) 2472

FIGURE 47

VKKTYGYIGS VAAILLATHI GSYQLGKHHM GLATKDNQIA YIDDSKGKAK 50
APKTNKTMDQ ISAEEGISAE QIVVKITDQG YVTSHGDHYH FYNGKVPYDA 100
IISEELLMTD PNYHFKQSDV INEILDGYVI KVNGNYYVYL KPGSKRKNIR 150
TKQQIAEQVA KGTKEAKEKG LAQVAHLSKE EVAAVNEAKR QGRYTTDDGY 200
IFSPTDIIDD LGDAYLVPHG NHYHYIPKKD LSPSELAAAQ AYWSQKQGRG 250
ARPSDYRPTP APGRRKAPIP DVTPNPGQGH QPDNGGYHPA PPRPNDASQN 300
KHQRDEFKGK TFKELLDQLH RLDLKYRHVE EDGLIFEPTQ VIKSNAFGYV 350
VPHGDHYHII PRSQLSPLEM ELADRYLAGQ TEDNDSGSDH SKPSDKEVTH 400
TFLGHRIKAY GKGLDGKPYD TSDAYVFSKE SIHSVDKSGV TAKHGDHFHY 450
IGFGELEQYE LDEVANWVKA KGQADELAAA LDQEQGKEKP LFDTKKVSRK 500
VTKDGKVGYI MPKDGKDYFY ARDQLDLTQI AFAEQELMLK DKNHYRYDIV 550
DTGIEPRLAV DVSSLPMHAG NATYDTGSSF VIPHIDHIHV VPYSWLTRDQ 600
IATIKYVMQH PEVRPDVWSK PGHEESGSVI PNVTPLDKRA GMPNWQIIHS 650
AEEVQKALAE GRFATPDGYI FDPRDVLAKE TFVWKDGSFS IPRADGSSLR 700
TINKSDLSQA EWQQAQELLA KKNAGDATDT DKPKEKQQAD KSNENQQPSE 750
ASKEEEKESD DFIDSLPDYG LDRATLEDHI NQLAQKANID PKYLIFQPEG 800
VQFYNKNGEL VTYDIKTLQQ INPP (SEQ ID NO : 83) 824

FIGURE 48